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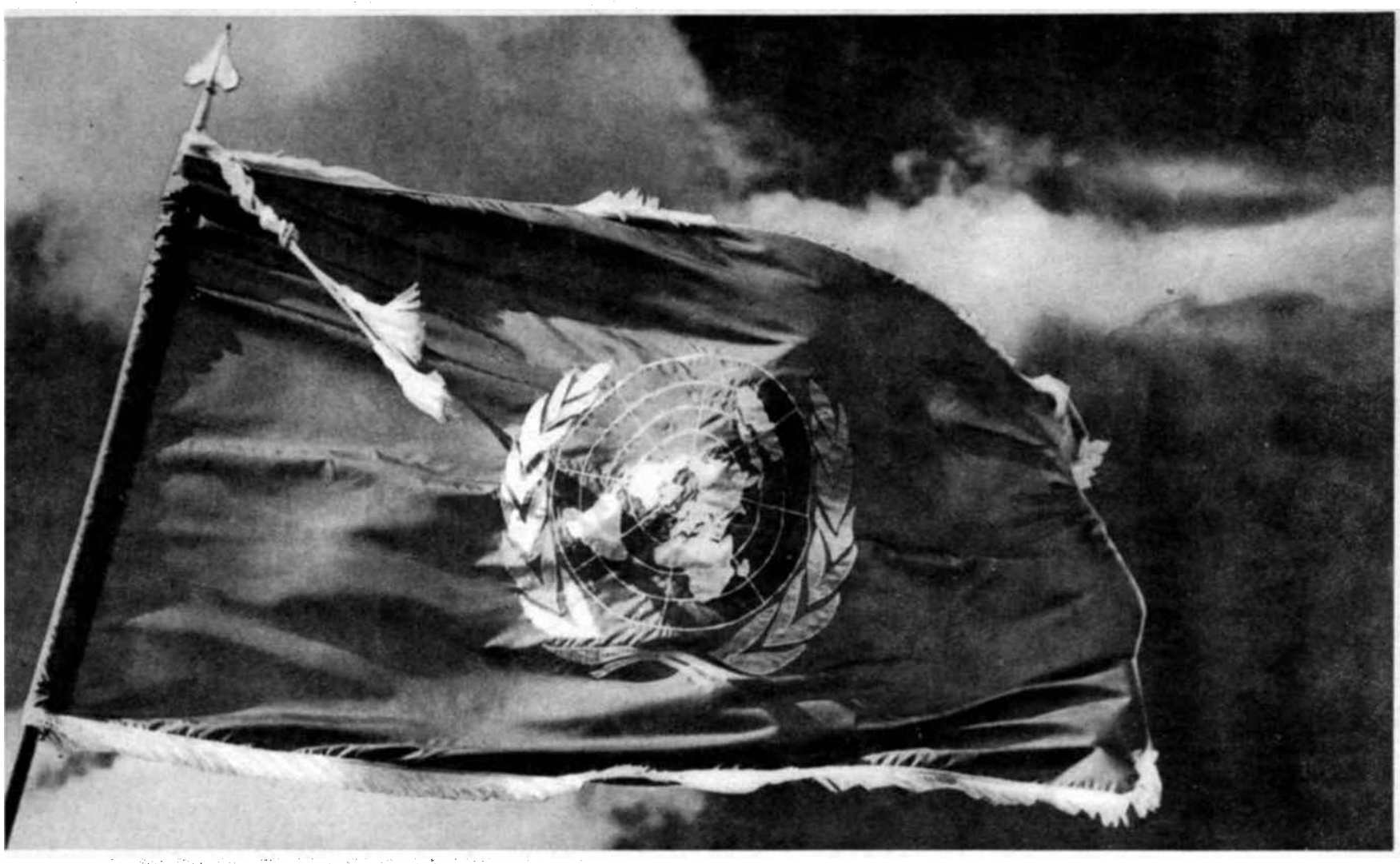
UNESCO



United Nations Technical Assistance in Haiti. Travelling on a UN Fellowship, Mr. Milord (right) studied modern irrigation methods in France. Now he takes part in a major irrigation project which will give Haiti more land for cultivation. This tiny Caribbean republic is of special interest as a centre of the first comprehensive United Nations experiment in technical assistance for under-developed countries.

UNITED NATIONS DAY

October 24, 1950

"There shall be peace"

"There shall be peace." This has been decided. WE have decided it—we, the peoples of the United Nations, who constitute more than nine tenths of the people on the face of the earth.

For once, let us be impatient. Let us brush aside all the timidities, the hesitancies of mere talk about the "hope" of men, women and children to have the chance to live in peace. It has been decided. There is more than talk and hope.

For, five years ago our DETERMINATION that there shall be peace was written — written not only in ink but large and clear enough in our faith and will to justify all the blood, sweat and tears that had gone before. Five years ago, we said in our Charter, the Charter of the United Nations, that we are: "DETERMINED to save succeeding generations from the scourge of war." Now, five years later, the slogan for United Nations Day — for the generation of the United Nations, for the century of the United Nations — is:

"THERE SHALL BE PEACE."

But peace is not merely an absence of war — a refuge for cowards, a cave for hermits, a playground for idlers — a kind of surrender in the face of the enemy.

Peace calls for heroes, who do more than hold their ground and rest on their fading laurels. It comes from the power, the courage, the intelligence of man, age-old weapons against the traditional enemies of men — war, famine, pestilence, ignorance.

This is the kind of peace we are building — we the peoples of the United Nations — five years after we signed the covenant we call the Charter.

And of the new weapons we are using, the new tools we are using, none is more important than the United Nations Programme for Technical Assistance. For this programme will help in a great task of peace — a difficult, yet entirely feasible task — nothing less than the remaking of the world — in which men, women and children may live in the reality of peace and with the sound hope for a better life.

United Nations Day messages from Mr. Trygve Lie, United Nations Secretary-General and M. Jaime Torres Bodet, Unesco's Director-General, are published in page 3 of this issue.

Reports on the United Nations Expanded Programme of Technical Assistance and the role Unesco will play therein appear on pages 5, 6, 7 and 8.

A SCIENCE MUSEUM GOES ON TOUR IN LATIN AMERICA

THE National Library of Peru, in the heart of Lima, created a traffic jam early last month, which was repeated every day for more than two weeks. Outside the library, the sidewalk was crowded with adults and children. As they filed past the entrance, they were counted by a photo-electric cell, clicking monotonously at a rate which went as high as 5,000 visitors a day.

The attraction was a travelling museum, intended to explain simply the newest developments in science. The story of crowds in front of the National Library in Lima goes back to Paris—to Unesco's Department of Natural Sciences. There the idea was first conceived of a prefabricated museum, which could be crated, placed in a train or the hold of a ship and then set up on short notice.

The purpose of the museum was to take science out of the bewildering terminology of the laboratory and bring it to the public in Latin America—both to adults and children. Unesco's funds, however, were limited, and the museum became a reality only with the offer of help from universities and science organizations in the United States.

When, last August, the museum had been stowed in Boston aboard a ship bound for Callao, Peru, it represented the combined efforts of Unesco, the Massachusetts Institute of Technology, the Harvard College Observatory and the Science Clubs of America. Its construction was carried out under the eyes of Mrs. Christine Buechner, an official of the National Research Council of the United States.

The portable museum's first stop was Lima, where it was shown under the auspices of the Peruvian Ministry of Education. After the country's senate registered a vote of thanks to Dr. Jaimes Torres Bodet. Unesco's Director-General, the museum moved on to Quito, capital of Ecuador. It is scheduled for a December appearance in Havana next month, during a conference of representatives of Unesco National Commissions in the Western Hemisphere.

Trip To The Stars

So far, the astronomy section of the museum has proved to be one of the biggest attractions. There, a portable planetarium, which can be viewed by as many as sixty persons at a time, takes visitors on a trip to the stars. (At the end of its run, the planetarium folds up into units no larger than a table.)

This astronomy section also includes photographs of such phenomena as comets, sunspots and meteorites as well as illustrated explanations of the workings of the solar system and of the giant telescopes used to study it. Part of this section is devoted to a telescope built by an amateur astronomer to demonstrate that this science can be appreciated and enjoyed with simple equipment—the kind that a schoolboy might construct.

The physics exhibit is the first to greet the visitor, since it begins with the beam of light broken on entering the museum, setting the photo-electric cell in operation and automatically recording the visitor's entrance. It displays operations in mechanics, heat, sound, electricity and electronics, optics and nuclear physics.

Among the equipment which the museum displays is a triple-axis motordriven gyroscope which visitors are invited to attempt to push off balance. Then there is a Van de Graaf generator, an electrostatic machine that builds up high voltages by charges carried on a moving belt. This machine, which steps up the speed of slow-moving ions (positively-charged particles) or electrons (negatively-charged particles) is often used by scientists to investigate nuclear atomic structure or to produce high-power X-rays.

As a whole, the museum is designed to be understandable to children and yet valuable to adults who have some background in science. Although there are simple models to explain each principle, the texts accompanying the display develop the theories and the applications of these principles.

This travelling science museum is much more than an educational road show. Its main objective is to give youth in Latin America a good look into the wonders of modern science in the confidence that this will encourage some of these boys and girls to make science their life work and thus to become the technicians and the engineers their countries need so urgently.

During its visit to Lima, Peru, the Unesco Travelling Science Museum was seen by up to 5,000 people each day. One of its biggest attractions was the astronomy section (above) whose exhibits included a portable planetarium.

NEW PRICE FOR COURIER IN U. S. AND CANADA

Due to increased costs, the subscription price of the Courier in the U.S. and Canada will be increased from $1 to $1.50, effective January 1st, 1951. The single issue price will correspondingly be increased from 10 cents to 15 cents.

EDUCATORS SEEK ANSWERS TO PROBLEMS OF PRIMARY SCHOOLS IN THE AMERICAS

JUST over a year ago, an eminent Brazilian educator described the state of primary education in most Latin American countries in the following terms:

"Over a large part of the continent, primary schooling is not only inadequate, it cannot even fulfil its allotted task of helping to raise the community's standard of living. This explains the people's indifference to it, the poor school attendance and teachers' lack of social prestige and their low salaries."

The educator, Professor Lourenço Filho, of Brazil, was making the closing speech at the Inter-American Seminar on Literacy Campaigns and Adult Education, whose work he had directed, near Rio de Janeiro. In it, he summed up the findings of a seminar group which dealt with problems of primary education and which reported: *"its quantitative and qualitative deficiencies are one of the principal causes of illiteracy on the continent."*

Last month, solutions to some of the tremendous difficulties facing primary schools in the Americas, where 19,000,000 children of school age are deprived of schools, were again being sought by a group of educators, this time, at a Seminar entirely devoted to primary education.

The Seminar, which was formally opened in Montevideo on October 2nd, sponsored by the Government of Uruguay, the Organization of American States and Unesco, was in reality a continuation of work done by the 1949 Seminar in Rio.

Three Vital Questions

ALTHOUGH most discussions concerned Latin American problems, experts had come from other parts of the world to discuss those common to their own areas and to contribute their knowledge and experience to the work of the various study groups. Unesco contributed extensive information on primary education in non-American countries and sent to the Seminar four distinguished specialists,—Mr. Robert Dottrens, Director of the Geneva Institut universitaire des Sciences de l'Education, Professor P. Rossello, Assistant Director of the International Bureau of Education, Mr. Giovanni Vozzer, Secretary of the Italian Commission for Educational Reconstruction, and Mr. Faker Akel, Inspector of Schools and Professor of Education.

The seminar study groups had before them five main themes for discussion: the organization of elementary school systems; plans, curricula and methods; universal, free and compulsory education; the education of teachers, and textbooks and schools materials.

Some of the vital questions for which these educators were seeking the most effective answers were cited by Unesco's Director-General, M. Jaime Torres Bodet, in a message to the Seminar. M. Torres Bodet said: *"...The following three problems of primary education deserve, I feel, special consideration by Latin American educationalists: How may the literacy campaign be speeded up without relaxing effort to introduce the necessary reforms in primary school curricula? How should curricula be varied to suit regional conditions, and more rationally adapted to the needs of rural communities? How is the principle of compulsory education to be made a reality?*

"In short, illiteracy must be resolutely stamped out, and living standards gradually raised, through a programme in which equally effective provision is made for primary education and for literacy campaigns..."

Courier
UNESCO

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FIRST REGIONAL CONFERENCE OF UNESCO NATIONAL COMMISSIONS TO OPEN IN HAVANA NEXT MONTH

THE first Regional Conference of Unesco National Commissions—the co-operating bodies set up by Unesco's Member States to associate their peoples with the work of the Organization—will open in Havana, Cuba, early next month.

Representatives of National Commissions in nearly 20 countries in the Western Hemisphere will concentrate their efforts on educational, scientific and cultural problems in Latin America, and Unesco's possible contribution to their solution.

The Conference, aided by Unesco's Regional Office in the Western Hemisphere, at Havana, aims to make Unesco's programme and work better known among the general public and intellectual leaders of Latin America. It will also work to foster the growth and help perfect the working methods of National Commissions there.

In addition, detailed studies will be made of subjects in Unesco's programme that are of special interest to Latin America. These include Fundamental Education, Technical Assistance, the organization of work of the National Commissions and the Dissemination of the Universal Declaration of Human Rights. This last subject will be of particular significance, as "Human Rights Day" will be celebrated in all parts of the world on December 10th —two days after the Conference opens.

Working parties will study this and other conference agenda subjects and their findings and recommendations will be submitted to plenary sessions, for practical action to be taken by the National Commissions.

A Committee of Experts will also discuss Unesco's contribution to international exchange of persons programmes, basic aspects of exchanges of persons and recommendations for the programme in Latin America.

The Conference will end on December 20th with the adoption of a work plan for the Latin American National Commissions for 1951.

UNITED NATIONS DAY, OCTOBER 24, 1950

"Two great postulates — solidarity in the face of aggression and mutual aid for the prosperity of all."

Jaime TORRES BODET
Director-General of Unesco

FIVE years ago today, the United Nations Organization was born into a war-torn world — a lodestar for the hopes of peoples still mourning the death of more than twenty million men. The purpose of the new body was to substitute for a tradition still tainted by trickery and violence, a system of solidarity and mutual aid mindful both of the established order and of the new demands for its social transformation.

Since then peace in freedom under the law has become the prey and the victim of conflicting propaganda; these terms, expressing the ideals for which so many lives were given, have today become perilously ambiguous. A great wave of disappointment has swept over the world, begetting doubt, fear and despair.

We cannot allow belief in the inevitability of war to paralyse action in favour of peace. Education, science and culture, all the forces and all the achievements of the human mind demand that we fight against any such abdication of the spirit. It is a myth fathered by our own troubled hearts to which we must oppose a true answer which will satisfy at once the claims of man's reason and his hopes of a less unhappy future. **That answer already exists as a principle: in a world tempted to despair of all human activities, the United Nations offer men the chance of ensuring the peace in freedom under the law which is alone consistent with their dignity. That answer, which is in conflict with all the forces opposing a world organization, demands active assent to the two great postulates of the United Nations — solidarity in the face of aggression and mutual aid for the prosperity of all.**

If we wish to achieve total security, these two postulates are indivisible. The mutual interdependence of the peoples, at all levels of their activities, links the fates of all countries. Yet that circumstance might open the way to abuse of power by the strongest if there were no rule of law to impose upon all men the moral judgment of mankind. Thus solidarity must be expressed in a system of international law and in effective guarantees of security.

SELF-FULFILMENT UNDER LAW AND EQUITY

NEVERTHELESS, any solidarity based purely on defence of the status quo would run the risk of crystallizing those same conditions in which the weak and unfortunate feel, not without reason, that their legitimate aspirations are being thwarted. Such a solidarity as this, founded only to perpetuate a static situation, could not withstand the irresistible march of history. Seeking only to stabilize what is by definition liable to change, it would be doomed to violent disruption unless balanced by that other principle which I have described as mutual aid between the nations.

It is not a question of abolishing rights; rather must their enjoyment be extended to the largest possible number of human beings. It is mutual aid between the nations which will enable the weaker fully to play their proper part in the economic, political and moral organization of peace. In the United Nations system, while political organs such as the Security Council guard the peace, it is the task of the Economic and Social Council and the Specialized Agencies — the World Health Organization, the Food and Agriculture Organization, the International Labour Organization, and Unesco — to make this peace more fruitful for all. The object of these bodies is the same; to afford every man the means of free self-fulfilment under a system of law and equity to which all have free access, in which all have their place.

These two complementary principles of collective security and mutual aid between the nations are not mere subjects for academic oratory; in the course of this very year there have been two outstanding demonstrations of their effectiveness.

The principle of collective security was challenged by armed attack against the Republic of Korea. Never have the United Nations and the Specialized Agencies reacted with such singleness of mind. Each organization took steps to answer the victim's cry for aid; to help restore peace and, each in its own sphere, to ensure that, when peace returned, that peace should have its full human significance. **It may be that all the general public has noticed is news of the battles in South Korea; nevertheless, what really gives to the sacrifice of the United Nations soldiers its true meaning is the hope that, when peace comes, health, work, culture and education will be not minor considerations, but matters of prime importance, and the fact that even now the Specialized Agencies are taking practical steps to improve existing conditions as soon as the time for reconstruction comes.**

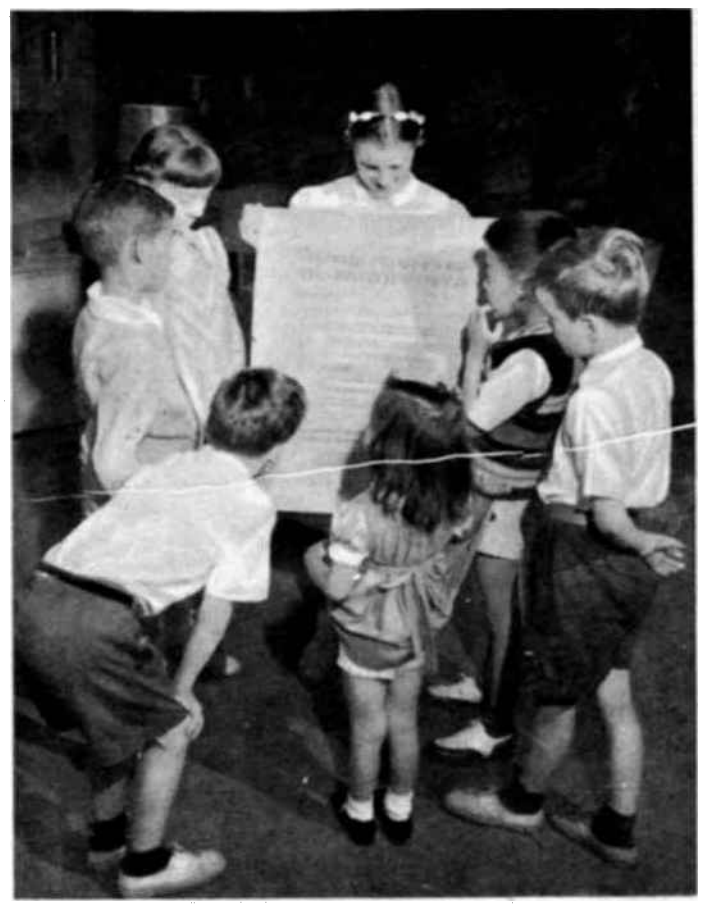
ARMED RESISTANCE IS NOT ENOUGH

ALMOST simultaneously with the Security Council's decisions on Korea, the principle of mutual aid was strikingly demonstrated when the Conference on the United Nations programme for Technical Assistance, with its 54 participating countries, approved the allocation of more than twenty million dollars for the economic advancement of under-developed countries. Here we are no longer concerned with the restoration of peace on the principle of collective security, but with raising the standard of life of the peoples by helping them to develop their human and material resources.

It is obvious that the bond of union between activities so different in themselves must be a view of life derived from a particular concept of mankind. We are convinced that man will find the way to self-fulfilment only in a community living in freedom under the law, and striving for social progress, — in other words, seeking always to excel its own past. That is the order which the United Nations are endeavouring to establish in a World of greed and passion. That is the order which Unesco would, through education, science and culture, wish to see reign in the minds of men and in the practice of their lives.

Most of the criticism directed against the United Nations and their Specialized Agencies springs from a defeatist attitude towards the heavy responsibility laid on twentieth-century man to strive for a united world. **Indifference to aggression is unthinkable, but it is just as wrong to imagine that armed resistance is enough in itself to avoid or repel aggression.** The difficulties which the United Nations must inevitably encounter can only arouse the spirits of all men of goodwill. For this victory they must not spare their strength. Nevertheless what we must recall to the minds of the peoples in such days as these is not merely the fact that it is necessary to guarantee collective security, but also the principle which makes such a guarantee essential. That principle is the one which brought the United Nations and the Specialized Agencies into being — that peace, to be enduring, must be based on right — and that the rights which ensure the liberty and dignity of man must be won and defended, under collective security by mutual aid.

Let us hope that, in the peaceful future to which Unesco is dedicated, the balance of these two forms of human solidarity may be preserved. The one is as necessary as the other for the safeguarding of peace and for our common progress.



"WE THE PEOPLES OF THE UNITED NATIONS..." World citizens of tomorrow read the preamble to the United Nations Charter. Every hour, every day, the work of the United Nations and its Specialized Agencies goes on all over the world—constructive work—work for peace that seldom gets into the headlines...

UNITED NATIONS APPOINT KOREAN RELIEF COMMITTEE

The United Nations Economic and Social Council adopted on October 16, an Australian resolution appointing a Temporary Committee of seven members of the Council to examine the probable needs of Korea for relief and rehabiliation.

The countries represented on the Committee when it held its first meeting on October 18th were: Australia, Belgium, Chile, Denmark, India, Pakistan and the United States.

The United Nations has also received a proposal from the United States for the appointment of a director-general to be in charge of Korean economic reconstruction. According to this proposal, the director-general would head a new body to be known as the Korean Rehabilitation Agency. This would be independent of other U. N. Commissions and would be completely responsible for the economic reconstruction of the country.

Among his other tasks, its director-general would be required to determine the types of goods and services required for the aid programme, to obtain sea transport for these materials and to advise Korean authorities on the allocation of the aid.

"... United in hatred of war and in hope for a better life..."

Trygve LIE
Secretary-General of the United Nations

IT is now five years since the United Nations Charter set forth the principles of a new world order. The past twelve months have been dangerous and difficult for the nations and the peoples of the world; a future of danger and difficulty confronts us all. And yet the United Nations still stands; the forces of Member states have rallied around its flag to turn back armed aggression; the Fifth Session of the General Assembly has begun with an unprecedented demonstration of purpose to work effectively for peace.

It is this purpose to work for peace by every means available which — coupled with enduring patience — is needed to see us through. I have never imagined that there was an easy way. A year ago on the anniversary of the United Nations I said that the United Nations way is a slow and often discouraging way to go about the work of building a peaceful world, but there is no short-cut.

The stake is the future of all mankind, the future of all cultures and all civilizations and all the varied ways of life which men have developed to meet their needs and their circumstances. If we succeed, the future is limitless in its possibilities for growth and for good; if we fail there will be no future worth the having for any of us. We must not fail.

NEXT TO PEACE — PROSPERITY

NEXT to the problem of peace, but allied to it, is the problem of raising the living standards of the many millions throughout the world who now exist in poverty. This problem, too, we must solve if we are to live together in amity and with a clear conscience. The United Nations in the past year has made a start towards solving this problem in the expanded programme of technical assistance; it is only a beginning, but a good one. We must follow through; again we must not fail.

I have said that "we" must not fail in patient working for peace; in patient working for higher living standards. By "we" I do not mean only the governments of the Member states of the United Nations, or the members of the Secretariat, although certainly they are included in the obligation. By "we" I mean all of us, all men and women of good will. The United Nations is our United Nations, its strength derives in the last analysis from all the peoples of the world who are united in hatred of war and in hope for a better life for everyone, everywhere.

THE KING OF THE BAMOUNS AND HIS ALPHABET

by
Dr. Alfred Metraux

THE rich complexity of civilization in advanced countries is frequently advanced as an argument to demonstrate the basic superiority of the "white race" in character and intelligence. **"Have the Negroes or the Indians produced a Plato, a Shakespeare, a Descartes, a Newton?"** is the question which has greeted even the most convincing scientific evidence of the basically equal abilities of all branches of the human family.

To compare such varied cultures in order to prove that the Negroes or Indians are congenitally inferior to the whites is a process of reasoning without value. The fundamental discoveries on which our whole civilization has been built—fire, weaving, pottery, agriculture, rearing of stock—were made by men whose skin pigmentation is today unknown, but whose stage of development was certainly far behind that of the peoples of Africa or America. One may even say, without wanting to sound paradoxical, that a savage living in an isolated region and provided with few cultural advantages, required far more genius to discover the bow or the boomerang than inventors today in their work to split the atom and to perfect the machines which are the pride of this modern age.

Each new discovery is the product of people engaged in simultaneous research, who frequently arrive at identical results at the same time. Laboratories and research workers collaborate so closely in this twentieth century that individual discoveries are becoming increasingly rare and difficult to achieve. The progress of our civilization indeed relies on this vast network of reciprocal contacts and on this collective research performed by teams of experts. To evolve a new technique from nothing, as one might say, is obviously a much slower and more difficult process.

The Unknown Heroes

CENTURIES ago, a poet sadly recalled the heroes who had died unknown, because there was no Homer at that time to record their valorous exploits for future generations. One could speculate on the number of great men who lived among the primitive races but of whom we know nothing simply because, lacking the written word, all remembrance of them has been lost. If we study ancient chronicles, missionary accounts, books of travel and works of modern ethnographers, we can discover an amazing gallery of talented men, even men of genius, among the so-called **"inferior races"**, who have been so lightly dubbed **"the white man's burden"**.

A man's accomplishments are limited by his cultural background. The story of King Njoya of the Bamouns, in the Cameroons, who invented, by himself, a system of writing and instructed his people in its use, should help ill-informed sceptics to overcome their doubts about the creative spirit of the Negro race. The details of the following story are taken from an article written for a scientific journal by the French scientist Maurice Delafosse.

In 1899, when the Germans occupied his kingdom, Njoya needed to communicate with his village chiefs and with those of his people attached to the German Command, but he did not want the Germans to know what was in his letters. He therefore decided to invent a writing that the Europeans could not understand. Calling together his head men, he explained his plan and asked their assistance in finding signs for each of the words of the local language.

The system of writing devised by the king in collaboration with his counsellors, began as a picture language in symbols, each sign representing either the drawing of a definite object or "the materialised shape evoked by an abstract idea". Each sign thus corresponded to a word, but without relation to the number of syllables in this word.

A Stroke Of Genius

SEVERAL years later, Njoya conceived an idea that was truly a stroke of genius. Words were no longer to be represented by drawings, but **the same drawings were to represent groups of sounds,** thus creating a syllabic writing.

These signs acquired a purely phonetic and conventional value, instead of suggesting objects or ideas. For instance, a calabash (ka) was first shown by the drawing of a gourd; later this same but simplified drawing was used to signify the syllable "ka" which forms part of many words.

In a few years, Njoya had advanced from picture-writing to a phonetical system — achieving what the Egyptians accomplished, and then in a very imperfect fashion, only after centuries of stumbling efforts. For a time, King Njoya's system of writing remained half-pictorial, half-phonetic, yet all the while the syllabic side was nevertheless being perfected.

Five years later, the king, influenced this time by observations made in a missionary school, introduced a new reform by giving his system a purely alphabetic character. He decided to keep only 80 of the 350 original signs, and those that represented the first ten numbers. He stipulated that "each of the alphabet signs should represent one sound only, the numerical signs keeping, in addition, the value of figures".

Frankly speaking, this last step towards alphabetic writing was by no means perfect. The royal phonetician did not succeed in breaking entirely free from syllabism, so the phonetic value of the 80 signs was not always clearly shown. Aware of the faults in his system, he made several attempts to simplify it. In 1916, the year when his writing-method was the subject of the story here outlined, his system seemed well on the way to becoming purely alphabetic. The signs bore less and less relation to primitive picture-symbols and became letters with increasingly simple outlines.

A Royal Teacher

ONCE having evolved a method of writing, this wise man launched a large-scale campaign to teach the alphabet to his people. He bought slates from the whites and personally taught pupils who, in turn, became teachers. The period of instruction over, the king continued to correspond with them and this interchange of letters kept alive their interest. By the middle of 1907, more than 600 of his subjects knew how to read and write. Njoya formed offices of administration, a public records department and a Registrar of receipts and expenses.

Attempts may be made to belittle the genius of Njoya by stating that he probably obtained the idea of writing from the Arabs or the whites. But this in no way detracts from the significance of his discovery. He may have known that the whites used written symbols to communicate with each other, but he certainly could have known nothing of the method. His own system originated out of his native intelligence and initiative. Let us also remember that cutting through time and tradition he achieved results in a few years that other systems of writing known to us today took centuries and even thousands of years to attain.

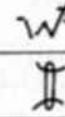
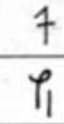
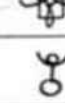
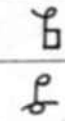
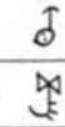
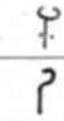
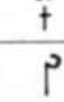
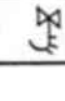
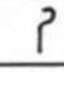
About the middle of the 19th century, another Negro, Momuru Doalu Bukere of the Vai tribe in Liberia, invented a system of writing which won a certain fame. Based on the pictorial writing used by his tribe, he gave a phonetic value to the signs. Today, thousands of natives still use this system invented by the "noble and modest" Momuru Doalu Bukere.

The story of King Njoya was deliberately chosen for this article because documents are available, and a study of them enables us to follow Njoya's line of reasoning. Many examples of talent, sometimes of genius, could have been cited among primitive tribes. A great deal could be said of the Maya Indians of Central America, who, entirely removed from outside influences, had already—between two and three thousand years ago—discovered the zero and given a positional value to figures.

The so-called "savage" or "barbarian" state does not originate from any congenital inability. It is simply one transitory form of culture among others, equally transitory. Neither primitive nor advanced civilizations have explored the full possibilities of mankind. One thing that seems certain, however, is the statement in the Declaration on Race published by Unesco, which affirms that: "the range of mental capacities in all ethnic groups is much the same."

Native kings, such as this West African ruler, must exercise judgement and statecraft of the same kind as heads of state in larger and more "advanced" countries, though the problems are different. But, men like these are little known to the world, chiefly for lack of Boswells. It was a native ruler, Njoya, King of the Bamouns, for example, who, with a superlative use of intelligence and initiative invented a form of picture writing, and within ten years transformed it into an efficient alphabet. The evolution of our own and similar alphabets took many centuries.

Extracts from the alphabet invented by King Njoya
(development during eleven years)

Words or ideas represented by original signs	Meaning	1907	1911	1916	1918	Existing phonetic value
a	he					a
ben	a dance					b, bé
ncha	fish					ch, tch, cha
fom	king					f, fo
ngou	country					g, gou
li	adult					l, li
rou	brother					r, rou
intou	six					t, tou (6)

SOCIAL SCIENCE IN THE MODERN WORLD

THE development of social sciences during the last fifty years holds as rich a promise for mankind today as did natural sciences at the beginning of the last century. Man is alarmed by the bitterness and anguish which go with the transition from one form of civilization to another and demands to know if science can help him to understand the laws which govern the complex relationships between and within different societies and thus to control the great changes of our epoch.

The role of the social sciences within Unesco has been conceived to answer the specific aims upheld by the Organization. All activities must be specifically directed to serve the cause of peace within the international framework. To serve these two conditions has been the aim of the Department of Social Sciences.

It is now time to draw practical conclusions from research carried out over three years with the collaboration of scientific organizations and eminent specialists. The sum total of this knowledge offers a rational basis for the recommendations that Unesco proposes to place before governments and non-governmental organizations anxious to preserve peace.

The programme, to be submitted to Unesco's Executive Board this month, marks a definite step forward. It is proposed that Unesco investigate the scientific methods and techniques which offer the best means for overcoming certain existing tensions.

Hundreds of governmental or private agencies in many countries are striving to abate racial prejudices and to fight the discriminatory measures which result from them. Sociologists and psychologists, for their part, suggest new ways by which the energies at present wasted in fruitless fighting can be directed to constructive ends. Groups and individuals continue their efforts in different directions without reference to the experiences of their neighbours. To make these methods more widely known, to assess their efficiency and encourage the use of those which prove the best, is one of the tasks which falls to Unesco.

Social tensions are fed by wrong ideas based on irrational beliefs or outmoded scientific interpretations. The authority that its international character gives Unesco, enables it to undertake a campaign to put within the reach of the masses the results achieved by scientists in their study of racial problems and the effect of the discriminatory measures against minorities.

Unesco played an important part in the drafting of the Universal Declaration of Human Rights. It is, therefore, morally responsible to uphold and disseminate these rights which it helped to formulate. Unesco must fight racism and all forms of social discrimination, in conformity with the spirit and letter of its Constitution.

Unesco is making an important contribution to the United Nations broad programme of technical assistance to help economically under-developed countries to enjoy the benefits of science and industry. Again it becomes the responsibility of the social sciences to bear in mind the human factor in the transition from one type of economy to another. Material development must harmonise with the cultural and social changes which will inevitably result. Unesco will play a useful role if it helps prevent a too sudden dislocation of cultures, with its aftermath of suffering and squandering of energy and goodwill.

It can be foreseen that, in a few years, new states will be added to the already large family of existing ones. These states will have to prepare, with as little delay as possible, a complex system of institutions, without which they cannot survive in the modern world. The adoption of entirely new organizations and procedures will provoke internal anguish and violent tensions. Unesco's experience in this field will perhaps be turned to good account by those states who accept the co-operation which will then be offered to them.

"ECONOMIC UNDER-DEVELOPMENT" — Enemy Of Man:

ECONOMISTS were the first to use the phrase "under-developed areas". Yet as a definition solely in the language of monetary exchange — in dollars, pounds, pesos, rupees or gourdes — it is grossly inadequate. A better definition would have to include the overtones of graphic descriptions of famines, epidemics; of unceasing and unrewarding labour, of the plight of hundreds of millions of human beings, prevented by ignorance from finding a way out of their misery. Statistics fail to give these overtones of tragedy that alone can provide an adequate definition. Yet statistics are used here for their graphic simplicity.

In 1939, a survey was made of fifty-three nations on all the world's continents These countries were divided into three groups; the first was of fifteen nations with a per capita annual income of more than $200; the second, ten countries, with a per capita annual income of between $100 and $200; the third, twenty-eight countries, with a per capita annual income less than $100. The first group made up one-fifth of the world's population; the second, one-sixth; the third, making about two-thirds of the world people, was co-terminous with the "under-developed areas".

The Yawning Gap

THIS was before a tremendous war which widened the gap between the highest and the lowest. Here are some further differences :

1. Life expectancy at birth in the first group was sixty-three years. "Under-developed areas" showed, when figures were available, an average of forty years, in some cases falling as low as twenty-seven years.

2. Out of every 100,000 persons in the first group, sixty-four died of tuberculosis annually. In the third and largest group, the rate was 333.

3. In the first group, less than five per cent of the population were unable to read and write. In the "under-developed" countries, the illiteracy rate averaged 78 per cent. Eighty per cent of the world's literate people lived in countries which made up only 40 per cent of the world's population.

4. It has been estimated that a man needs a diet containing 1,800 calories as a vital minimum for life. In the first group, the average food supply was 3,000 calories; in the last it was 2,150 calories, a slim margin against poor harvests or insect plagues.

Hunger And Ignorance

THE shortage of doctors and teachers was greatest in the regions where they were most needed. In the relatively healthy countries of the first group, there was more than one physician for every 1,000 persons. In the last group, there was only one for every 6,000. The countries with less than five per cent of illiteracy had almost four elementary schoolteachers for every 1.000 persons. Those where illiteracy was as high as 90 per cent had less than two elementary schoolteachers for every 1,000 persons — less than half.

In food production, the story was similar. The hungriest peoples, partly through lack of technical knowledge produced the least food. In the first group of countries, wheat fields were as high as forty bushels per acre in the period, 1935-39; in the third group, the figure fell as low as eleven bushels. Properly cultivated, an acre of rice land was made to yield — as a national average — seventy-six bushels, but in countries where rice was the staple diet, production fell as low as twenty-six bushels.

Human Realities

MECHANICAL energy — the greatest liberator of man from drudgery — was developed in few countries and was pitifully absent in precisely the regions where it was most needed. In the first group, the average person had 26.6 horse-power hours a day at his command; in the last, he had 1.2.

These facts and figures — horsepower hours, teachers per 1,000 persons, bushels per acre, life expectancy — contribute to a definition of under-development. But the human realities are more eloquent. A phrase like "life-expectancy" has echoes of tragedy in a nation which, while trying to increase its standard of living, finds that disease carries off its population. "Teachers per 1,000" is a very immediate problem to a young nation building for the future. "Horsepower hours" translate into money for development or the lack of it.

All these conditions continue to exist now. But what is new and encouraging is the fact that they have now been recognized as a world problem which requires a world solution.

THE CHILDREN WHO WAIT — AND HOPE. These children are symbolic of hundreds of millions of human beings who, in misery and suffering, wait and hope for the chance of a new life. Most of them are to be found in the "under-developed" areas, where two thirds of the world's population live and where poverty, malnutrition and starvation, disease and ignorance are the common condition. Today, their hope lies in the promise offered by the United Nations Expanded Programme of Technical Assistance—the first great international attack on poverty and its related ills.

"TECHNICAL-ASSISTANCE" — A Weapon For Man

WHEN a member of a family falls ill, a doctor is called. When a child reaches school age, he is taken to the classroom.

These simple sentences are statements of fact, however, only if an individual or a community has the money to pay for the services, and if the persons with the right qualifications to perform them can be found. For a whole country, the money needed may amount to millions of dollars or pounds. The persons with the proper training and education may be thousands of miles away. A rich country can get what and who it needs, if not at home then abroad. But where can a poor country find an expert on the newest technique in insecticides or a man qualified to run a soil research laboratory? And how will he be paid?

One important form of mutual technical assistance among nations has already been successfully in operation either on a regional or on a bilateral basis, through public and private agencies, and increasingly through the United Nations and a number of the Specialized Agencies.

In December, 1948, the United Nations General Assembly voted the modest sum of $288,000 for technical assistance, mainly through fellowships and expert advice. In March of the following year, the UN Economic and Social Council instructed the Secretary-General to work out an expanded programme of technical assistance.

Four Basic Conditions

THE next step in the development of technical assistance as a major objective of the UN was a report drawn up for the Council by representatives of the UN's Specialized Agencies. They outlined an international scheme for technical aid in agriculture, transport, industry, labour, education, finance, health and welfare. And to carry out the new programme, the Council formulated a set of operational conditions. These points were emphasized :

1. **It would be a joint, co-operation programme for assistance in economic development, given only on the request of the country concerned ;**
2. **The assistance would be designed to increase productivity in fields where benefits could be distributed to the entire population ;**
3. **The government receiving assistance would assume part of the costs ; (in practice as high as 50 per cent) ;**
4. **The assistance would not be a means of foreign political or economic interference with the domestic affairs of the country receiving it.**

The Council also created the framework of the administrative structure of the programme, in a manner designed to avoid duplication and wasted effort. It decided that the UN would itself take care of requests which did not fall within the specific provinces of its Specialized Agencies, such as industrial development and transport. And it proposed the formation of a Technical Assistance Board, made up of representatives of the UN's agencies, to co-ordinate the programme.

The Council's proposals were submitted to the fourth session of the UN General Assembly. They were unanimously approved on November 16, 1949.

Spirit Of Generosity

THE next step was to finance the programme. The Assembly asked contributions from the UN Member States and they were given generously at the United Nations Technical Assistance Conference held at Lake Success in June, 1950. Fifty nations not only reached the conference's goal of $20,000,000, but exceeded it by another $12,500.

The conference had the atmosphere of an international competition in generosity. This started when the United States pledged $10,000,000 if other contributions totalled $7,000,000. Then the American delegate offered to raise the United States' share to $12,500,000 provided that it amount, at that sum, to not more than 60 per cent of the total reached.

The responses of other delegates matched the American spirit.

The delegate from Venezuela — *My Government is prepared to raise its contribution to a total of* $44,000, *an increase of* $4,000 *over the amount previously pledged.*

The delegate of the United Kingdom — *We regard it as important that that figure* ($20,000,000) *be reached. We propose to increase the United Kingdom contribution to* $760,000, *that is, an additional* $28,000.

The delegate of the Netherlands — *Two days ago our delegation pledged* 1,500,000 *Dutch guilders. Now we find that it is only* $396,000. *We should like to raise this* $4,000 *to make the* $400,000 *round figure and help in attaining the* $400,000 *round figure and help in attaining the* $20,000,000.

The delegate of Liberia — *I am authorized by my Government to pledge the sum of* $8,000.

The delegate of Ceylon — *We regret that we cannot ourselves make a very large monetary contribution. My Government has instructed me to say that it will contribute a sum in Ceylon currency equivalent to* $15,000.

Fifty Nations' Fund

THE money poured in — shillings, afghanis, pesos, sucres, cruzeiros, dollars, lempiras, dinars, florins, pounds, francs, sols, rupees, and other currencies — to make the total of $20,012,500. The majority of the nations contributing were the very ones which had the greatest need for aid.

The 50 countries pledging funds were Afghanistan, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Burma, Canada, Ceylon, Chile, China, Colombia, Costa Rica, Cuba, Denmark, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Haiti, Honduras, India, Indonesia, Iran, Israel, Italy, Korea, Lebanon, Liberia, Luxembourg, Mexico, Monaco, Netherlands, New Zealand, Norway, Pakistan, Philippines, Sweden, Switzerland, Syria, Turkey, the United Kingdom, the United States, Uruguay, Venezuela, Yemen and Yugoslavia.

The money has now been allocated to the United Nations and its Specialized Agencies in the following manner :

	per cent
United Nations	23
Food and Agriculture Organization	29
World Health Organization	22
UNESCO	14
International Labour Organization	11
International Civil Aviation Organization	1

Unesco's share, therefore, is $2,300.000 to cover technical assistance activities for economic development, undertaken by the Organization up to December, 1951.

In July of 1950, the Technical Assistance Board reported that it had received requests from fifty-seven countries : some under the normal programme of the UN and its agencies, others under the expanded technical assistance scheme.

ON MARCH 4, 1949, THE ECONOMIC AND SOCIAL COUNCIL OF THE UNITED NATIONS adopted a resolution requesting "...the Secretary-General in consultation with the heads of the interested specialized agencies... to prepare a report setting forth: 1. A comprehensive plan for an expanded co-operative programme of technical assistance for economic development..." Thus was the signal given for the preparation of the vast programme which M. Trygve Lie, U.N. Secretary-General, has described as "what should become and can become one of the world's greatest achievements for lasting peace and for the social progress and better standards of life proclaimed in the Preamble to the Charter of the United Nations."

THAT ALL MAY LEARN is a film made under supervision of the United Nations Film Board, to show the world-wide efforts of Unesco in the fight against illiteracy. Set in a small Mexican community, the film demonstrates the down-to-earth values of being able to read and write. Here, peasants are being told by an educated member of their community what they must do to reclaim land that belongs to them. Bare literacy is not the end and may not even be the beginning of education, yet the printed word is a potent means of conveying ideas. The mind of the illiterate is often closed to ideas which are essential to economic and political development.

UNESCO'S SHARE IN TECHNICAL ASSIST

The meaning of "Technical Assistance" and the desperate, almost world-wide, needs it is designed to serve are dealt with on Page 5 of this issue of the COURIER.

Of the total funds, $ 20,012,500, pledged by fifty countries for the whole programme of the United Nations and its Specialized Agencies, Unesco has been allocated 14 %, $ 2,300,000, for its share in the work.

BEFORE the end of next year, 250 Libyans—some of them now illiterate—will have learned enough about Arabic typing and shorthand so that their country, now a United Nations trusteeship, will have clerks to man government offices when it gains its independence in 1952.

During the same period, an engineer will have surveyed the length and the breadth of the major rivers of Ecuador to determine the best sites for future dams to tap their hydro-electric resources.

And, also by the end of 1951, farmers in Ceylon will be learning how to read and, at the same time, how to produce more food from the same amount of soil, thus preparing themselves to be shock troops in their country's peaceful campaign to recapture three fourths of its land area from the jungle.

These examples from three continents are culled from a new programme of the United Nations Educational, Scientific and Cultural Organization. They represent the realisation of part of a world scheme of "technical assistance for economic development", now being carried out by the United Nations and its agencies, nations and organizations.

PRIORITIES, WAYS AND MEANS

HOW is a technical assistance project set in motion? The administrative machinery set up by the United Nations for its programme is extraordinary in its simplicity.

Basically, the process of asking international aid for economic development is no more complicated than that of writing a letter. In this case, the letter outlining what is wanted is written by a government and sent to Unesco or one of the United Nations agencies.

In every case, the letter is turned over to the United Nations Technical Assistance Board, which is charged with the responsibility of finding exactly the right Agency—or Agencies—to deal with it.

To cope with the question of priority, the Board and the Agencies have before them six basic standards by which to measure the importance of any request. These are:

1. **The relation of a project to economic development or to the betterment of social conditions essential to economic development;**
2. **The increase in productivity which the project would bring about;**
3. **The extent to which the requesting nation can help in the execution of the project;**
4. **The financial ability of the requesting government to continue the work begun by the UN after the assistance has ended;**
5. **The possibilities of applying the benefits of the project to other countries in the same region;**
6. **The urgency of the aid requested;**
7. **The equitable distribution of aid to the different regions of the world.**

The responsibilities of requesting governments are mainly financial. They include the payment of subsistence allowance to cover the living expenses of experts; the payment of such costs as transportation and medical expenses; the provision of office facilities; and sharing in the cost of fellowships and scholarships offered as part of the aid programme.

UNESCO FIELDS OF ACTION

THE formulation of requests by governments is not a difficult procedure. Unesco and the other Specialized Agencies have made clear just what they are prepared to do to aid the economic development of a country. Unesco's facilities for technical assistance, which is usually provided in co-operation with the other UN agencies, can be summarized under the following headings:

1. **ELEMENTARY EDUCATION.** The Organization is prepared to help in educational administration and finance, curricula and teaching methods, textbooks, school buildings and equipment, the planning of compulsory education programmes and the adaptation of educational systems to meet changing community needs.

2. **FUNDAMENTAL AND ADULT EDUCATION.** To raise the standard of living of the people through education, Unesco offers aid in literacy campaigns, education in health and agriculture, the development of co-operatives, and the encouragement of small industries and handicrafts.

3. **TECHNICAL EDUCATION.** Unesco has interpreted this term to mean education and training for industries, trades, agriculture and commerce from the primary school to the university level. Aid is available in the organization and financing of such schools, and on problems relating to their buildings and equipment, textbooks, the selection of staffs, and the co-ordination of their programmes with the country's overall economic development.

4. **BASIC AND APPLIED SCIENCES.** This extremely important phase of Unesco's technical assistance covers both teaching and research in the Natural Sciences. Physicists, chemists, mathematicians, biologists... all are essential to economic development.

5. **SCIENTIFIC INFORMATION.** This field is a broad one, covering various forms of documentation needed for scientific and technical education for carrying out research and for developing industry.

SERVICES UNESCO OFFERS

THESE are the fields in which Unesco is prepared to offer aid. Governments requiring assistance in one or several of these fields, normally indicate the form of aid they feel will be most effective. Here again, Unesco has drawn up a simplified list of the methods available to governments seeking technical aid. They are divided into four main types of services, as follows:

EXPLORATORY MISSIONS. These are teams of specialists intended mainly to aid countries on fact-finding projects in education and the natural and social sciences. The exploratory mission is usually of short-term duration and, under normal conditions, completes its work within six months.

ADVISORY SERVICES. This form of aid is intended for countries which have already carried out their own exploratory missions and gathered the preliminary data needed for a proposed project. In this case, a government may request an advisory mission to guide it in projects in education, basic and applied sciences and the use of the radio and visual material for educational purposes.

Unesco's experience in operating regional scientific offices around the world suggested a longer-term type of advisory service—the Advisory Science Office. If requested by a country, such offices will be set up to supply scientific and technical information.

TRAINING. Unesco is prepared to help in the training of teachers, scientists and other needed personnel by facilitating study abroad through fellowships or by assisting in the establishment of training centres within a country. Unesco is also prepared to call study groups for short intensive studies of problems arising in technical assistance, and may help set up demonstration projects to show people by example just what the use of new educational and scientific techniques can do for a region. Unesco is also equipped to aid governments in setting up centres for producing educational films and radio programmes.

RESEARCH TEAMS AND INFORMATION SERVICES. The research team, as defined by Unesco, consists of a group of scientists who will aid a country in research on technical or scientific problems standing in the way of economic development. One of the main information services offered is the bibliographical centre, including a library designed to collect, classify and digest for ready use, scientific documentation on problems of technical assistance. The information series will also include a photographic reproduction office to handle microfilmed documents. The bibliographical centre will make its services available to United Nations Agencies working on technical assistance problems and to scientists and industrialists in the entire region. The information services available through Unesco also cover public information teams; that is, press and radio specialists to aid countries in telling the largest possible number of people the aims of specific technical assistance projects.

The above categories of technical assistance teams and facilities are available to under-developed countries for 1950-51. But here again, Unesco's view of technical assistance is an elastic one. This "prospectus" does not necessarily mean that the Organization's activities will be limited to such services. If the needs of countries call for other techniques, the way is not barred to their use. In a sense, it will be the countries receiving aid who will help determine what Unesco's future technical assistance programmes will be.

TWELVE REQUESTS ANSWERED

IN the case of Unesco, as well as that of the other United Nations Agencies, there was no shortage of requests to put the money to work. In July of 1950, the Technical Assistance Board reported that it had received requests from fifty-seven countries. Unesco, at present, has requests from nearly two dozen countries on hand, and it has already taken action on twelve of them.

These twelve countries, are Ceylon, Ecuador, India, Indonesia, Iraq, Lebanon, Liberia, Libya, Mexico, Pakistan, Persia and Thailand. In their requests, they produced twelve different intepretations of "Technical Assistance for Economic Development" that is, interpreting it to fit their own immediate needs.

These varied interpretations are completely in line with the United Nation's conception of technical aid. This programme has no intention of setting up a production line from which would stream prefabricated economies and, even worse, standardised societies and cultures. The new economies will be fitted into the needs of the countries — not vice versa.

This principle explains the emphasis which the United Nations and, in particular, Unesco have placed on the educational side of technical assistance. If a nation does not have an adequate number of trained scientists and educators to pick up the work begun by specialists from abroad, technical assistance will merely die of inertia.

It also should be remembered that $ 20,000,000 is all that the United Nations has available at the present moment for the needs of the entire world. With that sum there will be no deserts blooming overnight, or mud huts mushrooming up into skyscrapers. Therefore, Unesco has decided that the amount of money it has on hand will give a greater return if it is invested in men instead of in drawing up grandiose paper projects. Unesco cannot build dams, but it can train engineers and teachers of engineering. When the money for the dams is available, the men — native, not foreign — will be there to build them.

TECHNICAL AID PHILOSOPHY

THIS might be called the philosophy of technical assistance as conceived by Unesco and the United Nations, Here, in twelve countries, is how it is being transformed from a philosophy into a programme of action. Space does not permit detailed treatment for each of these twelve countries. The single case history of Libya, described in a separate story on this page, will serve to illustrate many of the principles and methods to be used by Unesco in its part of the work of technical assistance.

CEYLON. This country, on its own initiative, launched a large-scale programme to reclaim its so-called "Dry Zone", which makes up 75 per cent of its land area. Unesco is aiding this programme with a fundamental education centre, emphasizing, literacy training and better farming methods. Ceylon also will have the services of two geologists to make an inventory of its mineral resources.

ECUADOR. Here, a four-man team of scientists and educators will be sent into the field. One member of the team, a chemical engineer, will assist in setting up a chemical engineering institute to put added research facilities at the disposal of Ecuadorian industry. The second will work with Ecuadorian educators on improving

AGAINST FAMI

TO FIGHT HUNGER through technical assista is a job at which the Food and Agricultural Or has already been working in many countries. Pa to the problem of increasing food production use of hybrid corn. FAO shipped this high-yield East to improve agriculture there, as it had war-devastated Europe. The FAO has also provi on fisheries, animal disease control and fores

UNITED NATIONS
ANCE PROGRAMME

the organization and the curricula of the country's universities; the third will assist the country in its literacy campaign, and the fourth will be the electrical engineer previously mentioned. In this joint mission, the ILO will send three advisers on industrial education and handicrafts.

INDIA. At a cost of $ 229,200, Unesco is helping India in its national programme of improving facilities for scientific research and training. As one phase, Unesco is sending seven experts in such fields as plastics, dam design, electrical engineering and low temperature physics. The second part of the programme will see Unesco help India to set up a bibliographical centre for scientists working in India, in technical assistance programmes in the region and in ali of South-east Asia. At present, India has a tremendous number of scientific documents on its hands with no adequate facilities for putting them into a condition where they can be readily used.

INDONESIA. Unesco will help Indonesia set into motion a training programme for teachers in resettlement areas, as well as to establish an adequate primary school system (at present only 25 per cent of the country's school-age children are in classrooms).

IRAQ. The University of Baghdad, building up its science department, is suffering from a shortage of teachers. In response to the government's request, Unesco is sending out a biologist, a mathematician and an industrial chemist to become temporary members of the faculty and, from a long-term viewpoint, is providing fellowships to enable Iraqui science teachers to study abroad.

LEBANON. Here Unesco, during 1950-1951, will make a study of the country's technical assistance needs, especially in the field of scientific and educational research.

LIBERIA. This African country presents a strange picture of economic development far outstripping what might be called human development. To enable Liberians to reap the full benefits of the tremendous changes being made in their country's economy, Unesco is helping their government with a broad educational programme. This scheme will concentrate on the expansion of facilities at Liberia College, the country's only higher educational institution and, at the same time, will work out methods of raising educational standards throughout the country— not an easy task since Liberia's population of 1,500,000 is divided into nearly twenty language groups.

LIBYA. By January 1, 1952, this country will become independent, but it is desperately short of civil servants. Unesco is helping in the operation of what can only be called a clerical and typing school and, in addition, is supplying funds to enable prospective holders of higher governmental positions to study abroad. (For additional details of the programme in Libya, see separate story on this page).

MEXICO. Here Unesco, in cooperation again with the ILO is planning to assist Mexican industrial training schools. At the same time, a bibliographical centre very much like the one planned for India will be set up to serve countries throughout Latin-America.

PAKISTAN. Two missions are to be sent to this country. The first, a team of four scientists specialised in seismology, atmosphere and magnetism research, will help set up the first institute of geophysics in Asia. Once it is in operation, its initial task will be to survey Pakistan's vast desert area to assess the possibilities of salvaging land, through irrigation, for food production. The second mission will seek to develop radio broadcasting and receiving facilities in Pakistan in order to make them effective media for adult education.

PERSIA. A scientist sent out by Unesco will advise the Persian Government on its seven-year economic development programme and will help determine where Unesco's technical aid facilities can fit into this programme.

THAILAND. A team of educators specialised in primary school training, vocational education, and the teaching of science and the English language, is going out to Thailand to help cope with a shortage of 20,000 teachers in a country where only one-third of the 70,000 available teachers have had adequate training.

In all of these countries, every foreign specialist will have his counterpart studying abroad on a fellowship to replace him at the end of his mission. In most cases, too, the accent has been placed on training teachers rather than students. Unesco does not want to become an international faculty : rather, it wants to give educators in individual countries the initial impetus they need to get their own systems under way.

TECHNICAL AID IS NOT A NEW IDEA. Unesco and other United Nations Specialized Agencies have been straining their limited resources for several years to carry out their own "technical aid" programmes. Unesco has given aid in education, science, mass communication, and in various cultural fields. To prepare audio-visual materials for fundamental education, for example, Unesco set up an experimental centre in China. Filmstrips, posters and pamphlets dealing with health precautions were tested in local villages. This photo shows members of a Unesco team preparing for a film show. The materials and lessons learned from the experiment will be available to educators all over the world.

LIBYA – A CASE IN POINT

In March 1950, Adrian Pelt, the United Nations Commissioner in Libya, sent a letter to Unesco asking for help. Mr. Pelt's assignment in the former Italian colony was to put into effect the resolution of the United Nations General Assembly providing for the establishment not later than January 1, 1952, of a constitutional government in a free, united Libya.

The area involved was under three different administrations : Tripolitania, administered by the British, with a population of 800,000 ; Cyrenaica, with a semi-independent government advised by a British Resident, and a population of 200,000; and Fezzan, with a population of 40,000 under French administration. Mr. Pelt needed help in training a corps of Libyan minor civil servants who would be prepared to carry out their tasks as soon as the new government began functioning.

Mr. Pelt's first requirement was for helpers well below the level of ministerial rank. He merely wanted persons who could help him provide the new nation of Libya with enough file clerks, stenographers and typists to carry on the normal business of government.

Unesco responded at once to the appeal, sending to Libya a representative equipped to make for Mr. Pelt an expert survey of the situation. The Unesco expert reported that Libya had not produced a secondary school graduate since 1939. Before 1939, the general level of education had been very low because of economic backwardness. It was only in 1947 that secondary schools were opened again in Tripolitania and Cyrenaica. No students would therefore graduate until 1951.

FIRST TASK LITERACY

The task of training Arabic typists and stenographers seemed relatively simple until it was discovered that the available personnel was illiterate and would, first, have to be taught to read and write.

The Unesco report also showed that the prospective nation's deficiencies in competent government personnel were equally great in the higher brackets. To remedy this lack, it was suggested that fellowships and scholarships for study in foreign countries as well as in Libya be provided. These were proposed to cover courses in local government methods, forestry, customs administration, police work and accountancy. It was also suggested that seven Libyans with teacher training be offered an opportunity to make further studies in England, for three or four months. The shortage of teachers in Libya was so grave that they could not be spared for a longer period.

Acting on the basis of the report, and on requests received from the administrations of the three areas which will form United Libya, Unesco decided to help in three ways: first, by establishing a clerical training centre; second, by providing scholarships to enable prospective holders of higher governmental positions to prepare themselves for these new duties through study; and third, by providing scholarships in education to ten men and women from the Fezzan.

TRAINING CENTRE OPENED

The total cost of this project is $ 57,500. In common with all the other technical assistance projects undertaken by Unesco, the sum is to come from resources outside the Organization's normal budget. The clerical training school will cost Unesco $ 32,000 to operate during the year 1950-51, a figure which includes the salaries of a principal and thirteen teachers. Unesco and the United Kingdom will share the other costs of operating the centre. These include subsistence allowances for pupils, the purchase of thirty-one Arabic and thirty-one English typewriters and the repair of the school building.

The training centre is already operating in Libya. Literacy training plays as important a part in its curriculum as the proper techniques of writing a business letter.

The case of Libya is an example of the kind of technical assistance which Unesco can offer, for it represents the maximum utilization of a small amount of funds to accomplish a definite purpose within a given time.

E, DISEASE AND DISASTER

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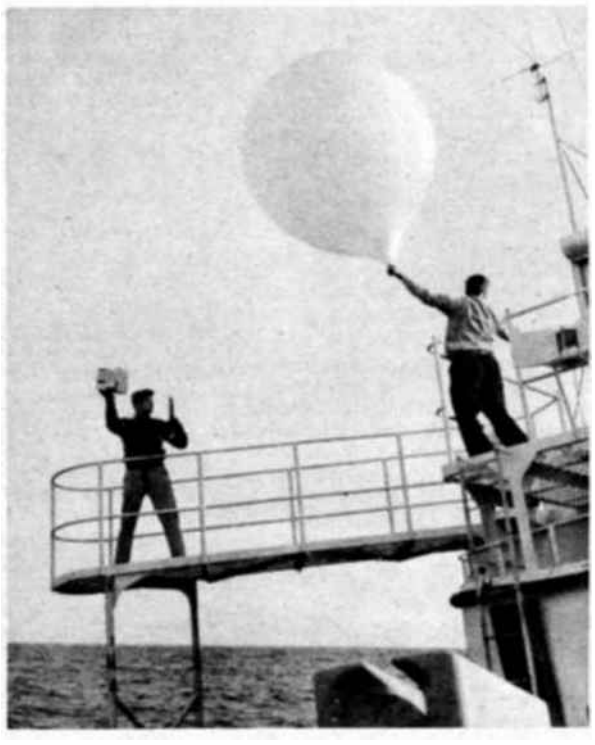
TO FIGHT DISEASE, which saps the energy and vigour needed to overcome obstacles to development is a global task for the World Health Organization (WHO). Malaria, already being fought by teams of WHO experts, in Asia, the Middle East and Europe, strikes an estimated 300 million people each year ; 2 to 3 million die ; others are weakened. In India, the trainees, shown here examining DDT spraying machines used in the WHO campaign, will soon be taking over this campaign themselves.



AIR SAFETY through international co-operation is the goal of the International Civil Aviation Organization (ICAO) ; one of the specialized agencies taking part in the technical assistance programme. Types of assistance being considered by ICAO include aerodrome and air route administration and control, training schools for flying, navigation, radio, meteorology and other technical professions and the despatch of technical missions. This photo shows a balloon with weather recording instruments being launched from one of the U.N. weather ships operated today by ICAO along the principal Trans-Atlantic Routes, providing pilots with the latest meteorological data, and maintaining rescue services.

SCIENCE AND TECHNOLOGY TO HELP UNDER-DEVELOPED LANDS

by Maurice GOLDSMITH

MODERN society is the result of man's increasing but still incomplete conquest of nature. Technology and engineering are powerful weapons in effecting this conquest. Historically, there are good reasons for the advanced technological society of the West. Today, however, as the Dutch historian R. J. Forbes has written : "*We live in a stage of human history in which the answers to the common problems that occupy men's attention at every point of the globe are no longer limited to certain areas and artificial lines on a map. The new science has established an international brotherhood of scientific thought*".

It is this recognition which accounts for the key role played by science in all programmes for technical assistance. As the Indian monthly journal, Science and Culture, has said (speaking for all under-developed territories) : "*We are convinced that the only way to achieve economic independence and regeneration would be through intensive application of science and technology to all productive endeavours*".

The Republic of India is indeed moving into action along these lines. Prime Minister Nehru has declared : "*I believe that all problems, both world problems and national, should have a scientific approach*". India herself has a great scientific tradition. In recent years, great Indian physicists like Sir C. V. Raman and Professor H. Bhabha, and chemists such as Sir Shanti Swarup Bhatnagar, have made unique contributions to world science.

To Narrow A Gap

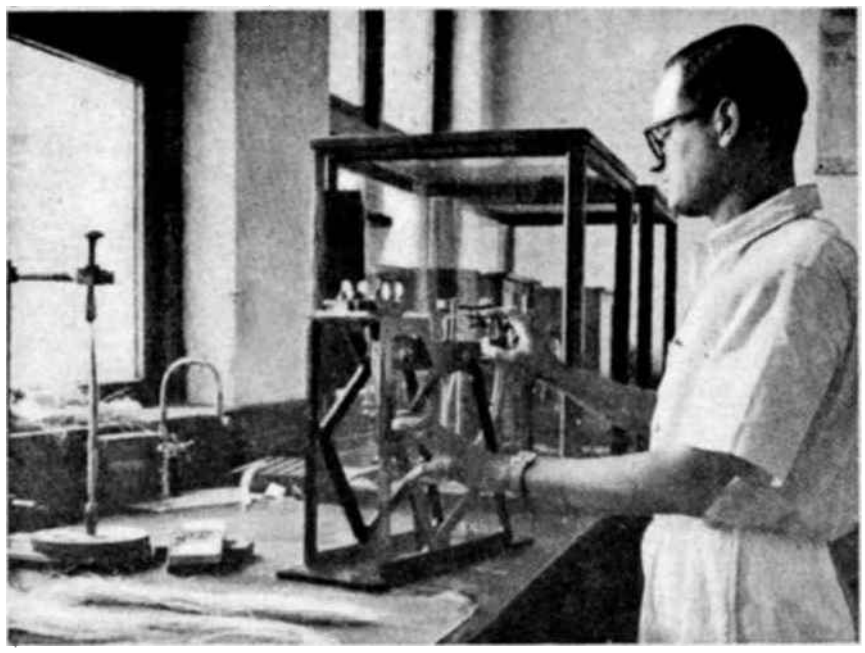
THERE is much to do in India, a country with a population of over 300,000,000, and natural population increase larger than any nation in Europe (with the exception of Russia). Taking the amount of energy available per head of population as an index of the level of technical civilization, India uses yearly the equivalent of less than one-fifth of a ton of coal per head as compared with the USA's 9 tons and Britain's 4. The technical assistance programme is designed to help narrow this gap for countries whose ill-nourished millions demand the material means for better lives.

Unesco will make available to India $229,000, a large share of its technical assistance budget for the first year. Specialists will be engaged by Unesco to assist India in several aspects of her own national programme. For example, Professor Turner Alfrey, of the USA, is to set up a division of plastics and high polymers in the National Chemical Laboratory. This is but one of the many new research institutions now being set up.

Three scientists are to go to India's National Physical Laboratory to do research in low-temperature physics. The technical equipment is to be provided by Unesco. Other scientists —specialists in marine engineering, naval architecture, dam design and geophysics— are to work at the Indian Institute of Technology.

In addition, Unesco is to aid India in setting up a giant bibliographical centre. This will be designed to keep Indian scientists informed of all aspects of activity. Its facilities will also be available to other United Nations technical assistance missions and to scientists in South-east Asia generally. One of this Centre's major tasks will be to "digest" more than 12,000 scientific articles published yearly in India alone.

The wise use of science in such countries as India can make the technical assistance programme meaningful, and demonstrate to the world how the conquests of science can help liberate all mankind from many of its ancient ills.



In this Indian jute research laboratory, an expert examines fibre bundles to determine the strength and extension of the yarn. Information from such research centres will be "digested" in the giant bibliographical centre which Unesco is helping to set up in India, and then made available to scientists and technologists in South-East Asia generally.

Aspects of modern science

WHAT IS THE QUANTUM THEORY ?

by Ira M. FREEMAN

Max Planck

TOWARD the close of the last century physical science, intoxicated with its own successes, reached a state of complacency seldom attained before in any branch of intellectual endeavour. The universe, it was felt, is a great machine, and the laws regulating its working had been discovered and understood. Apparently the many features of the inanimate world —the courses of the stars, electricity and its magic effects, the frenzied jostling of the molecules of matter— were all subservient to the laws of physics as then known. There was a general feeling among physicists that the only tasks remaining to them were the rounding out of details here and there and the sharpening of measurements wherever that appeared desirable. Then, almost at the turn of the century, the discovery of radioactivity, of X-rays and of electrons shook the world of science. The era of Modern Physics was born.

Not long thereafter came the first hint that something about our understanding of the physical world was not quite in order. The trouble was precipitated by a study of the radiation of light from a glowing solid object, such as a hot coal. Classical physics, eminently successful in accounting for the minute details of light in all its other manifestations, was apparently powerless to explain the observed distribution of brightness in the light coming from an incandescent lump of solid matter.

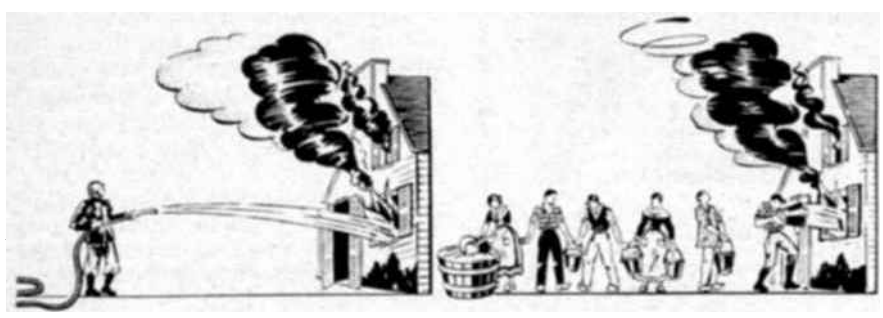
Energy Done up in Packets

THE problem was finally solved successfully by the theoretical physicist Max Planck in December of 1900, exactly half a century ago, but the solution was based on assumptions so novel and so utterly different from previous concepts that the first reaction of the world of science was one of outraged scorn. For, in order to make theory match observation, Planck was forced to assume that the radiation of light is a discontinuous, intermittent process—not at all comparable to the smooth, steady flow of water from a tap, but more like the discharge of bullets from a machine gun.

The individual "bullets" of course must be exceedingly small to give the appearance of steady illumination ordinarily observed. Indeed, it turned out that an average bullet—*or quantum*— of visible light carried only about one millionth of the energy expended by a mosquito in climbing a distance equal to its own length.

If this novel idea of "energy done up in packets" had succeeded only in explaining the single phenomenon of radiation from a heated solid it might have remained a mere scientific curiosity, provisionally tolerated only until the "true" explanation should turn up.

But this was not to be the case. When, presently, the Danish physicist Neils Bohr began to look for an explanation of the radiation from individual atoms and molecules of matter, he found that Planck's quantum idea governed this field also. Moreover, it did so with a precision equalling that with which Newton's gravitation described the wheeling of the planets in space. And even earlier. Einstein, shrewdly recognised that quanta were lurking behind the operation of a photo-electric cell—the now-familiar "electric eye" that is the very heart of sound motion pictures and television and that performs automatically such practical tasks as opening doors, sorting manufactured products, warning of fire —all through the medium of a beam of light.



Since 1900, physical theory and the practice of fire fighting have apparently developed along contradictory lines. Only a half century ago, it was assumed that all energy "flowed" as smoothly as water from a hose, as in the picture on the left. Now it is known that energy is communicated only in spurts, "bundles" or "quanta", as suggested by the drawing, right, of an old-fashioned bucket brigade. The smallness of the units of energy, and the rapidity of their succession, concealed the true process from generations of scientific observers.

Nature's Deception Unmasked

AND so in spite of the fact that it was completely at variance with the notion of continuous flow of energy assumed by the older physics, the quantum idea has become —through its spectacular successes—an accepted and indispensable part of modern science. It might be said that science has become resigned to the fact that whenever energy is transported from one place to another, Nature allows it to pass only in separate, detached spurts, or quanta. We are deceived into believing that we witness a continuous rather than an intermittent process, only because the individual bundles are so minute and so numerous. Yet, strange as it is, the quantum notion fits into place alongside two similar ideas with which science has long been familiar,—the discontinuous nature of both matter and electricity. The fact that matter itself is not continuous, but made up of individual particles— atoms—was surmised by the ancients and was convincingly demonstrated about a century and a half ago. Not much later there arose the notion that electricity, too, must be made up of unassociated bits—a concept that finally culminated in the discovery and measurement of this ultimate unit, called the electron.

Thus the quantum reinforces our conviction that certain aspects of the universe are, in a sense, granular. And there may be other quantities besides energy, matter and electricity which will be found to be of this nature, too. Perhaps space itself is one of them; time may be another. But here, we are still in the province of pure speculation.

★

If you are interested in reading more about the Quantum Theory, write to the Division for the Popularization of Science, Unesco, 19, avenue Kleber, Paris, for a brief bibliography on this subject, which will be sent free of charge.

Unesco Asks Five Nations To Aid In High Altitude Research Work

THE process of acclimatization of man living at sea level to the atmospheric conditions of high altitudes is still insufficiently known. Continued research work is needed to solve this problem—and is also important for gaining a better comprehension of the respiratory function of the blood.

Research dealing with the physiology of men living on the high plateaux of Peru, by scientists from the National Institute of Andean Biology, of San Marcos University, Lima, Peru, was recently recognized by the Joint Commission on High Altitude Research Stations, which urged that it should be extended to other Latin American countries.

Undertaken by Professor Carlos Monge and other members of the Peruvian institute, it showed the necessity to establish norms in medical practice—of blood counts, chest measurements, etc.—for people living at high altitudes. The Peruvian scientists accumulated a large number of norms which are necessary for medical practice on high plateaux.

In its resolution, the Joint Commission on High Altitude Research Stations requested Unesco to draw the attention of medical and university authorities in Bolivia, Colombia, Ecuador, Mexico and Venezuela, where there are people living at high elevations, to the opportunity they have to co-operate in this field. It also suggested that these countries form a Joint Committee to initiate and co-ordinate this type of research in their territories.

Unesco has now officially informed the governments of these five countries of the suggestions.

UNESCO-SPONSORED TRADE PACT READY FOR SIGNATURE

AN international agreement which will allow a wide range of educational, scientific and cultural materials to move across frontiers free of duty will be opened for signature on the 22nd of November, at United Nations headquarters, Lake Success, New York. The text of the Agreement was adopted unanimously at the last General Conference of Unesco, at Florence.

All Member States of Unesco and of the United Nations may adhere to the "Agreement on the Importation of Educational, Scientific and Cultural Materials," as the new pact is called. It will come into force following ratification by ten countries.

Sponsoring the Agreement, the Unesco General Conference urged Member States to sign and ratify it and to implement its provisions in the most liberal manner. The United Nations Economic and Social Council has also drawn the attention of Member States to the "practical importance" of the agreement.

ONE day, some years before the Second World War, a large oblong crate turned up at the Customs warehouse of a busy port. The Customs inspector, upon opening the crate, discovered that its contents consisted of a smooth and graceful piece of solid brass, shaped rather like a banana standing on its end. The inspector was completely at a loss as to how he should classify the object. Finally, he arrived at a decision: the object was "**block matter**" — and duty was charged according to the relatively high rate for imported raw material.

But the importer challenged the inspector's decision. The "**raw material**" **turned out to be the abstract sculpture "Bird in Flight" by the noted Rumanian sculptor, Brancusi, and, in the opinion of art critics, one of his finest works.** After much delay and argument, the inspector's ruling was reversed by the courts and the piece of sculpture was allowed to enter duty-free.

The inspector's view that the Brancusi was just a piece of brass, is not as extraordinary as it might seem. It is reflected in the tariff regulations of many countries which tend to regard not only works of art but other educational, scientific and cultural materials as ordinary commodities, subject to the same restrictions which are imposed on commercial imports.

This tendency has for many years seriously hindered the international circulation of educational, scientific and cultural materials. **Some countries tax imported films by the foot and sculpture by the pound. Duties on books range as high as 300 per cent. Scientific equipment, needed in research laboratories, is taxed with equal severity. Exhibitions and collections, destined for schools or art galleries, languish in customs warehouses while their sponsors try to raise the heavy bond often required by the authorities.**

AGREEMENT WILL END DUTIES ON MANY EDUCATIONAL SCIENTIFIC AND CULTURAL MATERIALS

NATIONS adhering to the Unesco-sponsored Agreement on the Importation of Educational, Scientific and Cultural Materials" will grant duty-free entry, under prescribed conditions, to a wide range of commodities. These are grouped in five categories:

PUBLICATIONS—books, newspapers, periodicals, manuscripts, musical scores, travel literature, maps and charts and architectural, industrial or engineering plans or designs;

WORKS OF ART—paintings and drawings, sculpture, hand-printed impressions, objects of art, antiques and scientific collections;

VISUAL AND AUDITORY MATERIALS—newsreels and educational, scientific or cultural films, filmstrips, microfilms, slides, sound recordings, patterns, models and wall charts;

SCIENTIFIC INSTRUMENTS OR APPARATUS, intended for education or research;

MATERIALS FOR THE BLIND—books, publications, documents and other articles.

The duty-free entry of visual, auditory and scientific materials, objects of art, scientific collections, and architectural, industrial or engineering plans or designs is limited to items consigned to approved institutions or organizations. Under similar conditions, any educational, scientific or cultural materials for public exhibitions will be granted import licences and relieved of duties and other charges.

Contracting States will, furthermore, grant licences and foreign exchange for publications imported by public libraries, and for articles for the blind. They will also undertake to simplify administrative procedures governing the importation of educational, scientific and cultural materials; facilitate the expeditious and safe customs clearance of such materials; and continue their efforts to promote the free circulation of these commodities.

HISTORY OF RESTRICTIONS

MOST of the tariff, quota and currency restrictions on the movement of informational materials are of fairly recent origin. In many cases, moreover, they have been extended to instruments of knowledge as part of a general trend toward control which engulfed these materials, along with other "**commodities**", fortuitously rather than by design.

During the earlier part of the period between 1850 and today, informational materials benefited by the general movement in favour of free trade. The Industrial Revolution and the absence of major wars led to a general demand for tariff reform, which in Europe led to the conclusion of a number of commercial treaties inspired by liberal principles. Thus, in 1860, the United Kingdom concluded with France a commercial treaty providing for free trade in books.

Though the next 20 years witnessed a return to protectionist practice in various countries, books continued to enjoy immunity from tariffs affecting most other classes of goods. The tariff rates introduced by France in 1892, for example, gave complete exemption to books regardless of origin. By 1906 Austria-Hungary, Germany, Japan and many smaller countries had followed the French lead. Italy, Russia, Spain and the United States allowed books in foreign languages to enter freely but imposed a duty on imported books printed in the native language.

WARS RAISE BARRIERS

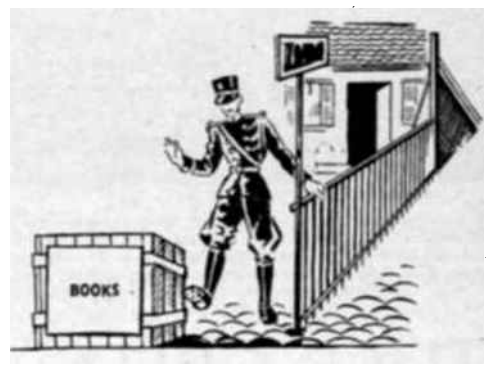
THE outbreak of war in 1914 brought this comparatively happy period to a close. During World War I itself, tariffs rose generally and new restrictive measures were devised to meet the emergency. Of these, the most notable was the licensing system, which enabled governments to exercise an unprecedented degree of control over foreign trade. Since the aim was to restrict trade in goods considered non-essential to the war effort, many articles of educational value suffered.

By the end of World War I, the whole structure of pre-war trade had been shattered. The economic depression of the 1930's led to a host of restrictions more rigid and extensive than those adopted after 1914. The division of the world into currency blocs and the introduction of quota systems placed an even greater check on world trade. Informational materials suffered particularly, though films enjoyed some relief under the "**Convention to Facilitate the International Circulation of Films of an Educational Character**", which had been adopted by the League of Nations in 1933. The 24 signatory States to this convention had agreed to exempt educational films from import duties and grant them the same tax privileges as might be enjoyed by locally-produced ones. But in the troubled years preceding World War II, political preoccupations diverted attention from the damage done to education, science and culture generally by tariffs, quotas and exchange controls.

"ESSENTIAL GOODS" ONLY!

THE vast devastation caused by the recent war and the external indebtedness of many countries struck a final blow at the multilateral trading system. Informational materials, which had never been more greatly needed, suffered as much, or more, than other commodities, since international trade was still largely confined to the exchange of "essential goods" and nearly all countries were faced by extremely complex payments difficulties.

Despite the growth of restrictions generally, many countries were disposed to provide special facilities for trade in instruments of knowledge. It was necessary, however, for an inter-governmental agency to draw attention to the problem as a whole, to stimulate governments into concrete action and to provide a framework within which remedial measures might be effected.



Unesco's first undertaking was to sponsor a new agreement to replace the League of Nations Convention on educational films, already mentioned, which had lapsed during the war. The draft of a convention, broadened to include many other audio-visual materials, was approved by the Unesco General Conference in November, 1948. Known as the "Agreement to Facilitate the International Circulation of Auditory and Visual Materials of an Educational, Scientific and Cultural Character", this convention is designed to remove duties, quotas, licences and other restrictions on films, filmstrips, microfilms, sound recordings, glass slides, models, wall charts, maps and posters.

This agreement is open for acceptance by all countries, Members of Unesco and of the United Nations. It has been signed by 18 nations and ratified by three (Norway, Pakistan, Yugoslavia). Ratification by ten countries is needed to bring it into force.

When the Unesco General Conference met at Beirut in November, 1948, it instructed the Director-General to prepare the draft of a second international agreement, designed to facilitate the international circulation of publications. A draft was drawn up and the Director-General took the opportunity to submit it for consideration by the Contracting Parties to the General Agreement on Tariffs and Trade (G.A.T.T.), which met at Annecy, France, in April 1949. Thirty-four nations, including 26 Unesco Member States, took part in this meeting.

The conference set up a seven-nation working party, under the chairmanship of Belgium, to consider the Unesco Agreement. The working party concluded that Unesco's general objective to remove trade restrictions on instruments of knowledge would best be furthered through a broad international agreement to facilitate the international circulation, not only of publications, but of a wide variety of educational, scientific and cultural materials. The working party then proceeded to draft such an agreement and the G.A.T.T. conference, after approving the text, recommended the convention to Unesco for sponsorship.

RECENT UNESCO ACTION

THE General Conference of Unesco, at its 4th session in September, 1949, instructed the Director-General to circulate this text to Governments and to convene a meeting of experts to revise it in the light of comment received. Delegates from 25 Member States met in Geneva for two weeks in March 1950 and reached agreement on a revised text. The Agreement on the Importation of Educational, Scientific and Cultural Materials, as it was now called, was submitted to the General Conference, at its 5th Session in Florence, and, with a number of further revisions, was adopted unanimously. Its terms are described in an accompanying article.

The General Conference urged Member States to sign and ratify it and to implement its terms in the most liberal manner. In a statement to the Conference, the Director-General declared that the entry into force of the Unesco Agreement would represent a substantial contribution, in the technical field, to mutual understanding and peace.

UNESCO MEMBER STATES SUPPORT SCHEME FOR IMPORTED PUBLICATIONS

THE Director of the Universal Postal Union has informed postal administrations throughout the world of favourable replies which Unesco has received from Member States to its request that they support measures for wider circulation of printed materials through postal channels.

Unesco asked Member States to support a scheme, initiated by the Universal Postal Union, which allows readers to pay in their national currency, at their local post office, for subscriptions to newspapers and magazines published in other countries. Belgium, Denmark, the Netherlands, Norway and Sweden informed Unesco that they were already applying the system in regard to certain countries and that they were increasing the number of countries from which their nationals could obtain publications. In addition, Italy advised Unesco that it would establish the service with all countries willing to carry out such exchanges.

Unesco also asked Member States to carry out provisions of the Universal Postal Convention, by which a 50 per cent reduction is allowed in postal rates for newspapers, periodicals, books and pamphlets. Iraq replied that it was willing to reduce rates for publications mailed from its territory. This brings to 36 the number of Unesco Member States which have announced their agreement to reduce postal rates for printed materials.

(C.O.I. Films.)

A new technique in educational films, similar to that used in French and Italian art films was used in "Local Government", which teaches schoolchildren about the history of local government in England, taking the city of Norwich as a typical example. It was made from a series of stills, meticulously drawn in period style like the one above, showing Norwich in the 15th century, with the camera providing the movement. Specially composed musical accompaniment creates the right atmosphere for each period.

THE SCREEN — A NEW "BLACKBOARD" IN BRITISH SCHOOLS

LESSONS "come alive" and schoolchildren understand and remember them more easily when teachers can supplement explanations with visual impressions of the subject being taught. Only a few years ago, however, teachers were obliged to improvise nearly all their own visual aids. Many adults can certainly still remember their teachers using an orange, an apple and a lighted candle to give a crude, but effective demonstration of the relationship between the earth, the sun and the moon.

Today, with films, wall charts, filmstrips, models and special maps supplementing or replacing teacher-made devices, one of the countries giving a valuable lead, especially in the field of films, is Great Britain, where the development of such visual aids has been going on for many years.

The belief in the value of films as educational aids began to grow in Britain about 1920. Since then, the interest and activity shown by teachers associations, education institutes and Local Education Authorities has encouraged film makers to produce material suitable for the school curriculum.

Further development is being made possible today through the National Committee for Visual Aids in Education, formed to plan and develop a visual aid policy for England and Wales, and the Educational Foundation for Visual Aids (E.F.V.A.) whose work includes the provision of information and facilities for educational authorities and teachers and help, in an advisory capacity, to sponsors and producers of new educational films.

Industry Helps Education

EDUCATIONAL film libraries have been set up by such bodies as the British Electrical Development Association, the Petroleum Film Bureau, the British Iron and Steel Federation, the International Wool Secretariat and the Tea Bureau. The first of these groups, for instance, has produced over 15 films dealing with the basic theories and principles of electricity. These ten minute films explain in simple language the why and wherefore of electricity and its different applications in the home and in the factory. They are loaned to teachers together with detailed notes and questionnaires which help them to make the fullest use of the films as visual aids.

In all, 1,000 prints of 15 films are in constant circulation throughout the country today, and in the case of "Generation of Electricity" and "Transmission of Electricity", 120 prints of each film have been made to meet the needs of schools and technical colleges.

An important contribution to the teaching of science and engineering has been made by the iron and steel industry. Films and filmstrips cover the obtaining of raw materials and the production of iron and steel. Area training officers in the steel industry use them for training apprentices, but they are also available to schools and technical colleges.

Wool has always played a large part in British national life. Accordingly, the industry has for years helped develop the use of visual aids for the teaching of economics, geography, chemistry, biology and domestic science. Similarly, the tea industry has done a great deal to instruct teachers in the use of visual aids and to provide schools with material which will enliven lessons on geography, history, transport and social customs. In addition to films, exhibitions are organised; cardboard models with sheets of cut-out figures made for children to assemble in the course of a lesson.

English In Six Weeks

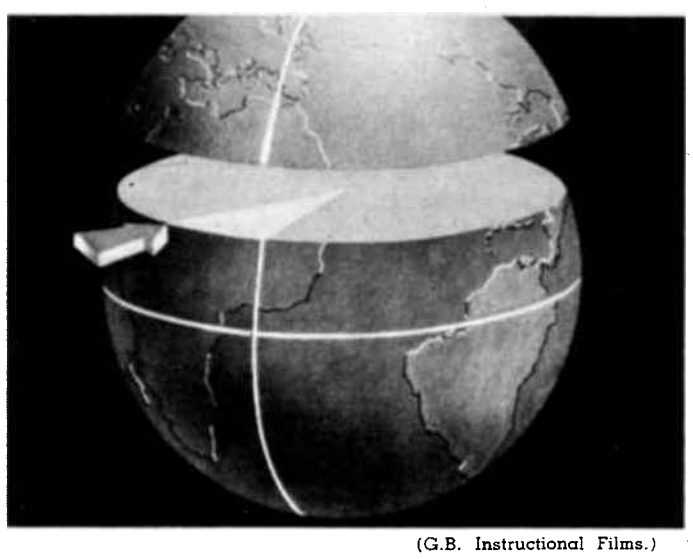
EVERY kind of visual aid was mobilized by the National Coal Board in 1947 to meet a thorny problem—the teaching of thousands of foreigners from over twelve different language groups, enough English in six weeks to follow their training course in mining. Although the lessons were based on the "direct" method—the teacher speaking sentences for the pupils to repeat—filmstrips played an important part and were found to be useful because they forced the trainees to focus their attention on one picture at a time as it was projected on the screen. Films were found useful for revision and for dramatisation of normal straightforward conversation Ordinary documentaries were used, but the sound track was replaced by a commentary which kept strictly to the language level reached by each particular group.

Among recently produced films dealing with language teaching was "La Famille Martin" which enables the pupil to see French characters talking naturally, and acting naturally as they do in everyday life. The tempo of the film is deliberately normal and not slowed up for fear of creating an artificial and erroneous impression.

Such films enable children who cannot hope to go overseas, to see other peoples' ways of life.

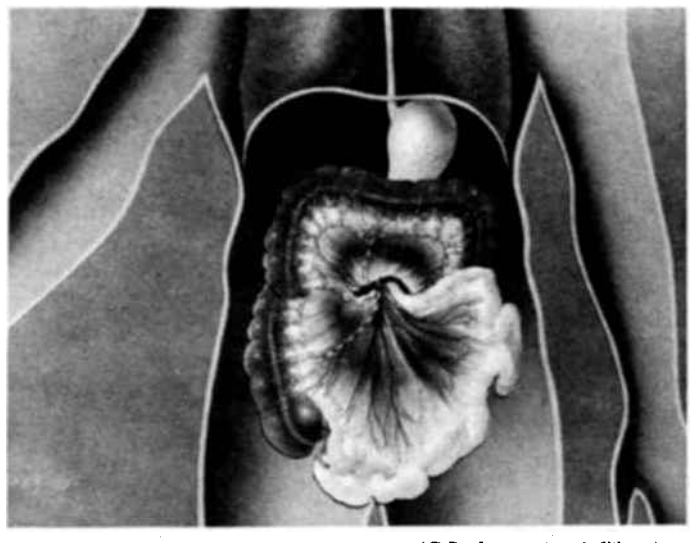
(Basic Films Ltd.)

LIFE ACROSS THE CHANNEL. Through the film, "La Famille Martin", English schoolchildren are able to see French characters talking naturally and behaving as they do in everyday life. Such films serve a dual purpose — language teaching and making children familiar with other peoples' ways of life.



(G.B. Instructional Films.)

Children no longer find it difficult to understand the meaning of lines drawn on a map of the world when it is explained to them as clearly as in the film "Latitude and Longitude" (above).



(G.B. Instructional Films.)

"Digestion" — one of the films on physiology made in Great Britain — is remarkable for its clear exposition of the entire digestive system and for its painstaking degree of accuracy. Such films, in which colour is used to make every detail visible and intelligible, make even the most difficult subjects amazingly easy to understand. This photo shows the route of digested food through Mesentor veins into Portal vein.

An outstanding achievement among films on physiology was "Digestion", because of its clear exposition of the entire digestive system, and for its painstaking degree of accuracy. Every muscle contraction is shown in animation. Colour is used to make every detail visible and intelligible. It is a fascinating production which makes the subject seem amazingly easy to understand.

Other Peoples' Problems

IT is perhaps in the geography lesson that the film and filmstrip come into their own. And here remarkable results have been achieved. For example, children have always found it difficult to visualise the world and to understand the meaning of the lines drawn on the revolving globe. A series of films has been produced describing "Map Projection", "Latitude and Longitude" and "Day and Night". The last named, produced in colour, is exceptionally clever in its use of revolving models and ingenious lighting.

Geographical films, produced from an unbiased point of view, have done much to create a better understanding of other peoples' problems.

Every recent British production of geographical films and filmstrips has tried to do more than teach the children the bare facts. An attempt has been made to show people in other lands as real people, with families and homes. Hence, there is little generalisation. A filmstrip on Persian oil-fields, will take a specific Persian worker and tell the story of his daily life against a background of the oil-fields and will thus create an understanding of his problems.

Another pointer to a growing awareness of the international value of education is found in the efforts made to obtain foreign films for teaching in English schools. British producers and British teachers are looking across the seas for available material.

The day is fast approaching when such exchanges will be facilitated by the removal of customs barriers through two international agreements sponsored by Unesco. The first agreement would relieve educational films from licences, quotas and tariffs and the second (described on page 9 of this issue of the Courier) would also free the movement of films as well as other educational materials.

Such exchanges are expected to give an added incentive to commercial firms and industrialists willing to undertake the production of films for schools, by providing a wider market for their productions.

MURDER OF PEOPLES OUTLAWED BY U. N. ACTION
GENOCIDE CONVENTION EFFECTIVE JANUARY 12, 1951

THE United Nations Convention on the Prevention and Punishment of the Crime of Genocide — the deliberate mass extinction of human groups — has now been approved by a sufficient number of countries to bring it into force on January 12, 1951.

On October 14, five states ratified or acceded to the Convention, bringing to 24 the number of states who have become parties — four more than was required to bring it into force.

The text of the Genocide Convention was adopted by 58 nations at the General Assembly of the United Nations in Paris, two years ago.

Nations adhering to it confirm that "genocide, whether committed in time of peace or in time of war, is a crime under international law which they undertake to prevent and to punish."

The Convention defines Genocide as acts committed with intent to destroy a national, ethnical, racial or religious group by killing or causing serious bodily or mental harm to its members, inflicting on them conditions likely to bring about its physical destruction, imposing measures to prevent births within the group or forcibly transferring children of the group to another group.

In addition to genocide itself other acts related to it which are punishable under the terms of the Convention are conspiracy, incitement, attempts and complicity in genocide. The Convention also prescribes that persons committing genocide shall be punished, whether they are constitutionally responsible rulers, public officials or private individuals.

The States which had submitted instruments of ratification or accession to the Convention by October 14 were the following :

RATIFICATIONS

Australia, Ecuador, El Salvador, Ethiopia, France, Guatemala, Haiti, Iceland, Israel, Liberia, Norway, Panama, Philippines (with reservations regarding Articles IV, VI, VII and IX), Yugoslavia.

ACCESSIONS

Bulgaria (with reservations regarding Articles IX and XII), Cambodia, Ceylon, Costa Rica, Hashemite Kingdom of Jordan, Korea, Monaco, Saudi-Arabia, Turkey, Viet-Nam.

EXPERTS PLAN ACTION TO RESOLVE INTERNATIONAL COPYRIGHT TANGLE

ON October 23, a group of international copyright experts met in Washington at the invitation of Unesco to consider the drafting of a Universal Convention on Copyright. The meeting marked an important step in Unesco's efforts to protect creative workers and to help remove intellectual and cultural barriers between peoples. A majority of the 37 countries which have thus far replied to a Unesco questionnaire are in favour of the establishment of a Universal Convention. As the experts met, they had before them a proposal that Unesco convene an inter-governmental conference to prepare the draft. In the article below are described some of the problems caused by the maze of legal differences in the field of copyright.

THE writer, the musician —any creative worker— has two important rights in the product of his labour: the right to a proper share in the profits of its sale and the right to have its original form and meaning preserved. These things taken together form what is known as "Copyright" or "literary and artistic ownership." The Universal Declaration of Human Rights gives it special mention in Article 27: "Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author."

But, in the same article, the Declaration mentions another right no less important: "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits." In other words, literary and artistic works must be as easily accessible to the public as achievements in the scientific field.

At first sight, these two prerogatives may seem to conflict: the right of the author to protect his work; and the right of the public to have access to it. One of the most serious problems to be faced in any definition of copyright is the need to maintain a delicate balance between interests equally deserving of consideration. According to the importance which legislation places on author's rights or those of the public, the definition varies of literary and artistic copyright. Many other factors play their part in the promulgation of copyright laws, not the least of which are the interests of distributing agencies.

When Creative Works Cross Borders

EACH country has to contend with internal difficulties according to its own legislation. But the problems of copyright go beyond national frontiers: books are translated, pictures reproduced, plays adapted and performed outside the country where they originated. As soon as we examine copyright from the point of view of its international application, the problem becomes even more complex. For instance, how can a French musician exercise his rights when one of his symphonies is performed in another country? Clearly, due consideration for the artist's rights must be safeguarded in foreign countries as well as in his own. If not, what would happen?

The creative work, lacking adequate protection, could be freely reproduced, its author receiving no profit at all; there is even the possibility of distortion or wrongful use. The author is in no position to take defensive measures.

To widen the sphere of protection over literary and artistic works in different countries, international agreements on copyright have been established. But since there are several of these agreements, the international protection of the artist's ownership is not uniformly assured throughout the world. In some regions, there is no protection at all.

A book published in English by a British citizen in Great Britain is automatically protected in the whole of the British Commonwealth, in 22 European countries, two South American countries, Israel and five Arabic-speaking countries. The same book is also protected, with reservations, in seven other countries.

Towards A Universal Convention

TAKE the case of a book published in Chile, written in Spanish by a Chilean. If the author has fulfilled the formalities required by Chilean legislation, which include the deposit of extra copies for each of the signatory countries to the Convention of Rio-de-Janeiro, his rights will be safeguarded only in ten Latin American countries, in four European countries and in three Arabic-speaking countries.

Foreign works come under different regulation in almost every country. Some laws give equal protection to national and foreign works Others only protect works created or published on national territory. Others again give varying treatment to foreign authors according to whether or not they belong to a country with which an agreement has been signed.

Such cases give only a partial idea of the confusion that exists regarding copyright, and of the need for the work undertaken by Unesco.

This work is not so much intended to achieve a standardization of national legislations, but to unite international conventions now in force into a single convention that will include not only countries which adhere to existing agreements but also those which have so far remained outside any form of convention.

Experts Study History Textbook Improvement for Unesco Programme

A committee of experts met at Unesco House on October 23 to study the recommendations of the Unesco-sponsored Seminar on "The Improvement of Textbooks, Particularly History Books", held at Brussels in August, including plans for a booklet designed to aid writers of history textbooks.

The Committee met under the chairmanship of Professor Alfred Weiler Director of the Lycée Experimental Henri IV, at Montgeron, France, who directed the work of the Brussels Seminar. It included: Howard R. Anderson, United States Office of Education; Manich Jumsai (Siam), Unesco Department of Education; J. A. Lauwerys, Professor of Comparative Education, University of London; Georges Panchaud, Director, Lycée Municipal de Jeunes Filles, Lausanne; L. R. Sethi, Education Secretary, Office of the High Commissioner for India and Professor Haakon Vigander, Professor of English and History, Oslo College.

United Nations assistance for Palestine refugees driven from their homes by military operations in the Middle East saved hundreds of thousands from starvation. Today, as this photo shows, the work is still going on. It was taken in Jericho, where Arabs are making their own bricks and building their own village in the barren desert sands, as an experimental re-settlement project, suggested by a U.N. survey mission. It will be watched with interest as a "model" for future projects designed to give employment and homes to nearly 700,000 Arabs refugees. Unesco's work for Palestine refugee children has resulted, thanks to the co-operation of relief organizations and the generosity of donors all over the world, in the opening of over 62 schools now attended by over 33,000 children. To enable the education and training of these children to continue, Unesco's Fifth General Conference issued an appeal for further assistance "in the name of civilization and humanity".

It happened in November...

BENVENUTO CELLINI

On 1 November 1500 an artist was born in Florence who was almost perfectly "typical" of the vigorous and questing spirit of the Renaissance. His compatriot Baldinucci described him as follows: **"Benvenuto, renowned for his flute playing and his great skill as a goldsmith, an excellent engraver of medallions, a sculptor of more than ordinary distinction, an architect and metal-founder, an ardent admirer of Michelangelo, skilful, vigorous, bold of speech and with a natural eloquence, ready at all times with the cutting phrase or repartee, and wont to express his opinions with the utmost frankness, irrespective of his audience, even to people of the highest rank..."**

THE METRIC SYSTEM

In their decree of the 13th Brumaire in the year IX (4 November 1800) the Consuls of the French Republic laid down: "First the decimal system of weights and measures shall be used throughout the Republic..." Man thus ceased to be the measure of all things. Cubit, foot, inch, acre, yard and fathom, gave place to more exact and objectively definable quantities as did the grain, pint, bushel, quart and pound.

Huygens and the mathematician Picard had already proposed that the unit of length should be that of the pendulum whose oscillation measured seconds, but it was not until the Revolution that universally applicable measures were adopted : the metre—a ten millionth part of a meridional quadrant of the earth; the kilogramme—the weight of a litre of pure water at 4° centigrade.

'FOR THE PURPOSES OF MUTUAL UNDERSTANDING...'

Five years ago, Unesco was established. On 16 November 1945, representatives of 40 governments and 7 international organizations, assembled in London, signed the Final Act, which is now the Constitution of Unesco. On behalf of their peoples, the governments then declared that : **"The States parties to this Constitution, believing in full and equal opportunities for education for all, in the unrestricted pursuit of objective truth, and in the free exchange of ideas and knowledge, are agreed and determined to develop and to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and a more perfect knowledge of each other's lives".**

LEO TOLSTOI

Two months before his death, on November 20, 1910, Count Tolstoy, greatest writer of his time, wrote a letter to Mahatma Gandhi, then a lawyer practising in Johannesburg, on non-resistance, another name for the "law of love which has been preached by all the sages... and expressed most clearly by Christ..." "The aspiration of the soul for communion with our fellow men", he wrote, "is the only ultimate law of life". "And so", he told the young Hindu, "your work in the Transvaal, which seems to us to lie at the uttermost end of the earth, is yet the thing on which our interest is concentrated; it is the most important work in the world today..."

ROBERT LOUIS STEVENSON

On 13 November 1850, Stevenson began the feverish life which was to take him from his native Scotland through a succession of seaside resorts, hotels and sanatoria to the fabulous islands of the Pacific. His tuberculosis gave him little peace, yet the creation of a new book marked almost every stopping-place on his distressful journey.

The last phase of his life began in 1890 when Stevenson, his wife and his adopted son, cruising in the Pacific, landed in Samoa, where Stevenson started to build a house. He was to remain there until his death, as the protector of the people, the friend of the king, and almost a king himself, exhausting himself by his efforts to stir the world to indignation against colonial exploitation.

Courier
UNESCO

SCHOOL IN THE MAILBOX

Australia's "Phantom Schools" Serve 18,000 Children

By Walter GEORGE

EDUCATION in Australia is free and compulsory, and yet 18,000 children don't go to school. Instead, the school goes to them by way of His Majesty's mails. In each of the Commonwealth's six capital cities there is a school, complete with complement of teachers, yet no pupils are to be seen; a kind of phantom school.

If you ask, you'll be told that its pupils are all over an immense land —in the mountains and forests of Victoria perhaps; in the tropics of Queensland, or the Northern Territory; in the far north of Western Australia—anywhere, in fact, where Australian children need education and are out of reach of Australian schools.

These are the Correspondence Schools. Since early in the first World War, they have been taking education to children, and to some adults. Some pupils lived in lonely, outback homesteads or prospector's camps, or were isolated in lighthouses, or travelling with some circus. Others were bedridden or in hospital.

Several years ago, two children did a full course while travelling with their mother through England, Europe, and America.

In Victoria, for example, education by correspondence began in 1914, when a countryman who lived more than eight miles from the nearest school asked the Education Department if anything could be done to teach two of his boys. The Chief schools' inspector passed the question on to the principal of the Teachers' Training College, who put it to some of the students.

Five of them volunteered to try teaching the boys by correspondence, each one making himself responsible for a subject. Before long, they were sending out lessons to a younger brother as well, and soon afterwards there were so many requests for correspondence work that the student teachers could not cope with them.

That was when the correspondence schools officially came into being. Other States soon followed suit, and now, although there is some slight variation between States, the broad plan is Commonwealth-wide.

At each of the headquarters schools, those phantom schools at the State capital, is a headmaster or mistress with a staff of one teacher to about every 40 or 45 pupils enrolled.

Keynote of the work is a friendly personal interest, and letters and gifts that come to the schools show what a happy bond exists.

The schools usually provide three courses of instruction. The primary course covers all the normal subjects children learn during their first seven years at school, and in the last two years the girls learn plain sewing and cookery. In the super-primary course, children prepare for the Qualifying Certificate (common entrance) examination, and most of the work is in English, with craft-work like fancy stitching, free-hand drawing, elementary design, some applied arts, knitting, and crocheting. The secondary course is for those preparing for the Intermediate (junior local), and Leaving Certificate (matriculation) examinations.

Pupils receive a set of lessons once a fortnight, or once a week in some States. These are usually in the form of instructional leaflets, which take the place of textbooks. Only for English literature and geography subjects are textbooks needed, and these are available in cheap editions. Each child has three note-books for each subject, so that while one is being corrected, the second is in the post, and the third is being used.

Postage is free both ways. The correction of books is very carefully done, with lucid explanations The teachers call the children by christian name, praising what has been done well, gently reproving untidiness, and usually including a little message for mother or supervisor.

Parents Learn Too

ALL this brings about a close friendship between teacher, parents, and pupils, for teachers sometimes have to instruct supervisors as much as they do children.

Usually the supervisors are mothers who, despite the many duties of the outback housewife, are willing to do anything to help their children receive an education. It is noticeable that the less educated a mother is, the more determined she is that her children shall learn their lessons.

One mother wrote : *"I will do my best to keep the children's work up to standard, but when I tell you that I have five children between the ages of five and eleven, as well as a tiny baby, you will understand just how difficult it is at times to cope with everything".*

One mother could read only very little herself when she applied to a school for lessons for her first child. When the first set arrived, she learned the lesson herself before giving it to the child. After a few weeks she managed to get one set ahead. She carried on like this for years until, in fact, her child passed the Qualifying examination. Eventually her five children completed the course.

Many of the children, too, do their work under great difficulties. One little girl who could not walk, did everything up to the Leaving examination by correspondence. Another, who lived far out on the Nullarbor Plains, in Western Australia, was left motherless at the age of nine. She carried on bravely with cooking, bread-making, sewing and mending for the family, and found time to do her own correspondence lessons and supervise those of her two brothers. Her lesson books were always a model of neatness.

One boy who was totally deaf from birth reached grade four after three years of correspondence work. With incredible patience, and helped by a special course of lessons, his mother taught him to speak and to follow the speech of others by lip reading.

At regular times during the week, the Australian Broadcasting Commission gives school broadcasts, and at times these are by a correspondence school teacher. In such cases the children listen delightedly to people they know so well by letter, but usually have never seen.

One little girl always puts on her best frock and brushes her hair nicely before sitting down to her radio lesson. Even the boys feel that the occasion is a special one, and habitually wash and tidy themselves in honour of it.

Sense Of Community Life

SOMETIMES, of course, the children do meet their teachers, for families are encouraged to visit the school when they come down to the cities, and hundreds of them do so. In this way, close personal attachments grow, and teachers come to be regarded as distant members of the family.

Besides giving formal instruction in school subjects, the correspondence schools do a great deal to foster a sense of community life among outback children, and to lead their interests into wider fields.

Not only children learn from the schools. Many adults have taken advantage of the lessons, and the school rolls include well-sinkers, opal miners, station hands, and alien immigrants who want to learn English.

These, then, are the correspondence schools. Their work is not as well known as it should be in the cities, but they have a very real place in the hearts of the country people. This is easy to understand, for the schools bring friendly help to harassed mothers, education to children who otherwise would be untaught, and enlightment where it has been previously shut out.

1. At the mailbox of their home near Goulburn, New South Wales, Pat and Helen Fisher eagerly inspect their Correspondence School teacher's latest report on their work. Their teacher is at Blackfriars School, in Sydney, 140 miles away.

2. At Blackfriars School itself, the headmaster, Mr. W. Finnigan, is here conferring, with his assistant, Mr. H. Kellerman, on Correspondence work.

3. Bill, at his studies, likes the open air. He's one of the best pupils of the Blackfriars school "class".

4. At the home of the Grant family at Braidwood, Mrs Grant helps her daughter Una, aged 12, with a geography lesson without breaking the strenuous routine of a farm wife's household work.

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